
**THE DARK AND BRIGHT SIDE OF
NETWORKING BEHAVIOR:
A RESOURCE-THEORETICAL COST-BENEFIT APPROACH**

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Abbreviations

Table 1

Abbreviations

cf.	Compare
COR	Conservation of resources
g	Grams
ED	Ego depletion
e.g.	For example
etc.	And so forth
HD Stroop	High depletion Stroop
HR	Human resources
i.e.	That is
LD Stroop	Low depletion Stroop
NW	Networking
OCB	Organizational citizenship behavior
UoC	University of Cologne
s	Seconds
vs.	Versus

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Abstract

Networking behavior leads to career success in the long term. However, networking research has widely neglected to examine how people directly experience networking, particularly with regard to short-term personal costs. Shedding light on potential costs, however, is important because it allows individuals to make more informed decisions about whether and how to use networking as a career strategy. Adopting a resource-theoretical approach, I build upon conservation of resources and ego depletion theory to develop and test a model capable of explaining how networking behavior has a dark and bright side. My central research question is: How does networking behavior affect energy resources, defined as highly volatile resources inherent in a person? Data from two laboratory ($N = 334$) and two field studies ($N = 328$) show that networking simultaneously depletes and generates energy resources. On the dark side, networking encompasses several processes (e.g., impression management) that deplete self-regulatory energy resources. Extraversion serves as a buffer against the depleting effect of networking behavior. On the bright side, networking behavior generates affective energy resources, as manifested by positive affect. Taken together, following networking behavior, people can be described as “depleted, but happy”. Furthermore, networking behavior and energy resource processes are related to attitudinal (e.g., work-related well-being) and productive (e.g., work performance) outcomes on a daily basis. Findings should be integrated into future human resources practices and networking trainings to stimulate a critical reflection of networking behavior as a universal career strategy.

Zusammenfassung

Networking-Verhalten führt langfristig zu Karriereerfolg. Hingegen kann die bisherige Networking-Forschung nicht erklären, wie Menschen ihr Networking-Verhalten erleben, insbesondere mit Blick auf kurzfristige persönliche Kosten. Die Berücksichtigung potenzieller Kosten ist jedoch relevant, damit Menschen bessere Entscheidungen treffen können, ob und wann sie Networking-Verhalten als Karrierestrategie einsetzen. Ich habe einen ressourcen-theoretischen Ansatz gewählt, um vor dem Hintergrund der Conservation of Resources- und Ego Depletion-Theorie ein Modell zu entwickeln und zu testen, das sowohl Kosten als auch Nutzen von Networking integriert. Die zentrale Frage lautet: Wie wirkt sich Networking-Verhalten auf Energie-Ressourcen aus, welche als schwankende personale Ressourcen definiert sind? Daten aus zwei Laborstudien ($N = 334$) und zwei Feldstudien ($N = 328$) zeigen, dass Networking-Verhalten einerseits Energie-Ressourcen erschöpft und andererseits Energie-Ressourcen generiert. Auf der Kosten-Seite umfasst Networking-Verhalten verschiedene Prozesse, wie z.B. Impression Management, die selbstregulatorische Energie-Ressourcen erschöpfen. Extraversion schwächt Ressourcenerschöpfung durch Networking ab. Auf der Nutzen-Seite generiert Networking-Verhalten Energie-Ressourcen, was sich in positivem Affekt manifestiert. Zusammenfassend können Personen, die Networking betrieben haben als „erschöpft, aber glücklich“ beschrieben werden. Darüber hinaus hängen Networking-Verhalten und damit verbundene Energie-Ressourcen-Prozesse mit einstellungs- (z.B. arbeitsbezogenes Wohlbefinden) und leistungsbezogenen (z.B. Arbeitsleistung) Auswirkungen auf Tagesebene zusammen. Die Ergebnisse sollten in zukünftige Personal-Maßnahmen und Networking-Trainings integriert werden, um eine kritische Betrachtung von Networking-Verhalten als universelle Karrierestrategie anzustoßen.

Introduction

It is who you know... So, we are constantly told to network in order to succeed in our careers. That is, to build, maintain, and use interpersonal relationships that provide access to professional resources, which, in turn, might be leveraged for work and career success. In light of the relevance of networking behavior for work and career advancement, it comes as no surprise that networking piques the interest of practitioners and researchers alike.

Popular books (e.g., Liebermeister, 2015) and newspaper articles (e.g., Groll, 2017) enthusiastically encourage people to create and foster professional ties to promote their careers. Likewise, because networking is thought to improve work performance, organizations are advised to foster their members' networking behavior as a competitive edge (e.g., Kay, 2010). Accordingly, companies, conferences, and professional associations increasingly hold special networking events, and recently, online platforms (e.g., www.linkedin.de) through which professionals can grow and organize their networks have gained significant followings. Recently, a networking app (Grip) geared to matching and introducing the most relevant networking contacts,¹ like popular dating apps such as Tinder, was developed to further facilitate network building (Google Inc., 2017). That is to say, there is no shortage of networking opportunities and tools, and in order to successfully master these, people might consider enrolling in one of many networking webinars or trainings (e.g., Schütte & Blicke, 2015).

Clearly, networking research supports the view that networking is beneficial. More specifically, networking behavior facilitates access to interpersonal resources such as strategic information, which might be used for professional success (cf. Gibson, Hardy, & Buckley, 2014).

¹ Users are presented potential contacts and anonymously swipe their interest to establish a “virtual handshake” that, in the best case, is the basis for future collaborations.

To name but a few empirical study findings, networking behavior is positively related to job search success (e.g., van Hove, van Hoft, & Lievens, 2009), work performance (e.g., Thompson, 2005) and career success (e.g., Wolff & Moser, 2009). Thus, existing networking research emphasizes that networking behavior leads to work and career benefits in the long term.

However, research generally remains silent about how people directly experience networking. That is, how do people feel after they have engaged in networking behavior? Are they lively, caring, and happy or rather jittery, uncomfortable and exhausted? Existing networking studies provide no satisfactory answers, so scholarly understanding of networking behavior remains limited in at least three ways. First, as networking research predominantly focuses on long-term consequences, particularly career success, it remains unclear how networking behavior affects outcomes, which take effect within relatively short-term intervals. Second, previous studies have mainly focused on work-related consequences of networking behavior. However, outcomes of networking behavior might also transcend the workplace and thus have an impact on people's private lives. Third, in recent years, scholars have begun to criticize the prevailing research focus on positive consequences of networking behavior, instead suggesting that networking behavior might also have a "dark side" (Wolff, Moser, & Grau, 2008, p. 114). For instance, a recent study shows that instrumental networking behavior can make individuals feel dirty from a moral standpoint (Casciaro, Gino, & Kouchaki, 2014). Taken together, these limitations show that, to date, little research attention has been directed to short-term, personal, and negative consequences of networking behavior. Filling these gaps, however, could help in several ways. For example, addressing short-term effects might give insight into how people directly experience their networking behavior, thus allowing for a finer-grained process approach towards networking. Furthermore, by accounting for effects on people's personal lives, networking can be embedded

into the broader context of people's lives. Finally, integrating costs of networking behavior might help explain why some people typically shy away from networking even when they recognize the importance of being well connected ("knowing-doing gap", Pfeffer & Sutton, 2013, p. 4). Furthermore, knowledge about costs might help people to come to more informed decisions about whether and how to use networking as a career management strategy.

I approach these questions by taking a resource-theoretical perspective. In the networking literature, resources are described as central because networking behavior is considered a means to gain professional resources. Yet, surprisingly, scholars in the field of networking behavior have not drawn extensively on resource theories. In recent years, resource theories have become increasingly popular in the organizational literature (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014; Hobfoll, 2011). Arguably, one of the most influential integrative resource theories is the conservation of resources (COR) theory (Hobfoll, 1989, 2001). COR, originating from the stress literature, emphasizes how resource loss and gain can influence individuals' stress and well-being. For example, COR theory has become fundamental in explaining how resource loss results in burnout, which is characterized by exhaustion (Hobfoll, 2002; Hobfoll & Freedy, 1993; Maslach & Leiter, 2008). In addition, COR links resource gains to improved well-being, for example in the form of work engagement (cf. Halbesleben et al., 2014). Building on COR, I seek to develop and test a theoretical model capable of explaining how networking behavior is a double-edged sword regarding its effects on people's personal resources in the short-term.

COR begins with the basic tenet that individuals strive to obtain, retain, foster, and protect resources (Hobfoll, 1989, 2002). Resources are "those objects, personal characteristics, conditions, or *energies* [emphasis added by the author] that are valued in their own right, or that are valued because they act as conduits to the achievement or protection of valued resources" (Hobfoll, 2001,

p. 339). To date widely neglected in networking research, the developed model focuses on the relationship between networking behavior and energies, which are characterized as volatile and personal resources such as self-control or affect (ten Brummelhuis & Bakker, 2012). Along these lines, my central research question is: *How does networking behavior affect energy resources?* As an extension of the basic tenet, COR postulates the principle of resource investment. This principle suggests that people must invest resources in order to gain resources and achieve goals (Hobfoll, 2001). Building on this principle, I consider networking behavior a resource investment behavior, (cf. Halbesleben & Wheeler, 2015), igniting two main energy resource processes: an *energy resource drain* process and an *energy resource gain* process.

On the dark side (energy resource drain), networking behavior requires initial resource investments. If the invested resources, however, are finite and diminish with use, people will probably end up with drained resource reservoirs. As illustrated by the ego depletion (ED) theory (Baumeister, Bratslavsky, Muraven, & Tice, 1998), self-control resources are consumptive. Networking behavior encompasses several processes that, according to the ED theory, consume and thus deplete self-regulatory resources, such as goal-directedness, impression management, and emotion regulation (cf. Baumeister, Vohs, & Tice, 2007). Therefore, applying ED theory to COR's resource investment principle, I propose that networking behavior depletes self-regulatory resources. To further establish the energy resource drain process, I seek to identify boundary conditions of the energy resource drain process. Building on COR's argument that personality can influence the process of resource loss (Hobfoll, 2002; Hobfoll, Freedy, Lane, & Geller, 1990), I suggest that personality traits (e.g., extraversion) and skills (e.g., social skills) might be able to mitigate the depleting effect of networking behavior.

On the bright side (energy resource gain), networking behavior is a means to gain work-related resources (cf. Gibson et al., 2014; Porter & Woo, 2015). Thus, when people invest resources into networking, they expect these investments to pay off, either immediately or in the future. (Anticipated) gain of resources should also be manifested by enhanced resource states with regard to affective energy resources. In other words, individuals might experience positive affect after engaging in networking. Taken together, networking behavior should simultaneously deplete (self-regulatory) energy resources and generate (affective) energy resources. Building on COR, networking behavior and energy resource drain and gain should further lead to differentiated attitudinal (e.g., work-related well-being) and productive (e.g., work performance) outcomes over the course of a day (Hobfoll, 2001; ten Brummelhuis & Bakker, 2012). Therefore, I also integrate attitudinal and productive outcomes of networking behavior.

To summarize, the main purpose of this dissertation is to develop and test a model of networking behavior that explains short-term energy resource drain and gain integrally. To that end, I first review and synthesize research and theory on networking behavior and its antecedents and consequences. Based on the literature review, I identify several crucial questions that have not yet been tackled in existing networking research. Second, I elaborate on two resource theories that serve as guiding frameworks in developing the theoretical model: Conservation of resources (Hobfoll, 1989, 2001) and ego depletion theory (Baumeister et al., 1998). At the core of this dissertation, I integrate the networking and resources literature into a theoretical model of networking behavior, energy resource processes, and attitudinal and productive outcomes. Next, I test the proposed model in four studies. I present two experimental laboratory (Studies 1 and 2) and two field studies (Studies 3 and 4). Finally, I discuss implications for theory, research, and practice.

By developing and testing a model of networking behavior, energy resources, and outcomes, I seek to make five important contributions to the networking literature. First, I pioneer in taking a resource-theoretical perspective on networking behavior. Even though in the networking literature, resources are described as central, networking has not yet been considered in light of resource theories such as conservation of resources theory. Drawing upon COR, I seek to predict and test how networking behavior depletes and generates a specific form of resources, that is, energy resources.

Second, I pay heed to *short-term* effects of networking. Short-term effects have been widely neglected in networking research, thus it remains unclear how people directly experience networking behavior. Because energies are highly transient (ten Brummelhuis & Bakker, 2012), they can only be adequately captured with a novel finer-grained process approach. To date, networking studies mostly rely on cross-sectional data, whereas the few longitudinal studies have relatively long periods between data collections (e.g., every 12 months over the course of 2 years; Wolff & Moser, 2010). Typically, in these studies, networking behavior is conceptualized in a rather static way by asking individuals to estimate how often they have shown networking behaviors in the past months or year (e.g., Forret & Dougherty, 2001). Likewise, criteria are typically measured statically (e.g., number of promotions received at a given point in time, cf. Wolff & Moser, 2010). However, theoretical frameworks such as the conservation of resources theory suggest that resource processes are more dynamic than static (Hobfoll, 1989; 2001). Accordingly, scholars (e.g., Halbesleben et al., 2014) recently called for research designs that “better match the dynamic nature of COR theory.” (p. 1356, see also Bolino, Harvey, & Bachrach, 2012). To address this criticism, I break new ground in terms of research designs, using experimental and diary study designs.

Third, I integrate *personal* resources into networking research. This is highly relevant, given that personal resources such as energies can have considerable downstream effects on employees themselves, as well as on their organizations and families (Hobfoll, 2001; ten Brummelhuis & Bakker, 2012). Therefore, I also integrate daily outcomes that have transcended the workplace and entered into an employees' private life (e.g., feelings of work-life conflict). By doing this, I seek to embed networking behavior into the broader context of people's lives.

Fourth, by adopting a *cost-benefit* approach, I suggest that networking is not exclusively good, but cuts both ways. From a theoretical standpoint, the simultaneous examination of the resource-consuming and resource-generating processes of networking behavior is crucial because it provides a more comprehensive test of COR. From a practical perspective, shedding light on potential costs of networking behavior is important for people to decide whether and how to use networking as a career management strategy.

Fifth, I examined boundary conditions of the energy resource drain process. More specifically, I identified personality traits and skills that act as buffers against the depleting effects of networking. Integrating moderating effects of personality allows for determining more accurately, who must be particularly aware of the resource costs inherent in networking. Of practical significance, this might help explain why some people usually shy away from networking even when they desire to obtain the long-term benefits of networking, such as effective networks and career success (Ingram & Morris, 2007; Obukhova & Lan, 2013; see also Gallagher, Fleeson, & Hoyle, 2011).

Theoretical Background

Networking Behavior

In the first part, I discuss what we know about networking behavior and its antecedents and consequences. The literature review reveals that several crucial questions remain unsettled in existing networking research. Therefore, in the second part, I discuss what we should seek to learn in order to gain a deeper understanding of networking behavior.

What we know

In this literature review, I provide answers to several crucial questions. First, how is networking behavior defined and measured in networking research? Second, what are antecedents of networking behavior? And third, what are consequences of networking behavior? Figure 1 illustrates a theoretical model of networking behavior and its antecedents and consequences on part of the individual.²

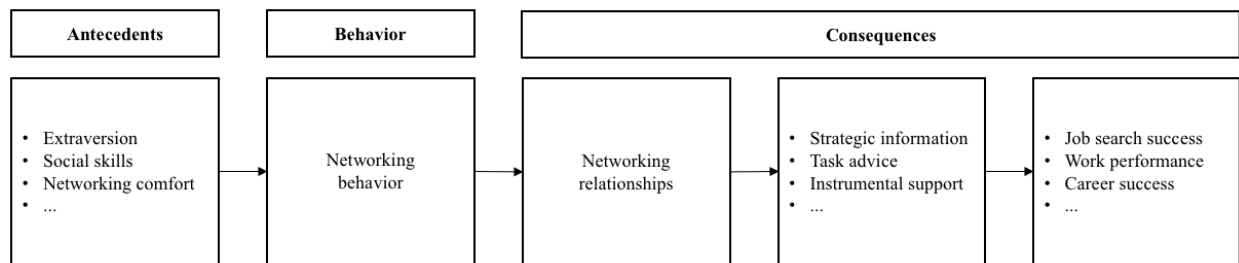


Figure 1. Theoretical model of networking behavior and individual consequences and antecedents. Based on Gibson et al. (2014).

² In reviewing the literature, I primarily focus on antecedents and consequences on part of the individual as opposed to the organization.

Networking research

Networking research can be traced back at least to the early 1970's sociological and managerial works. In 1974, Granovetter emphasized the importance of an individuals' "weak ties" (p. 1460, i.e., less intimate and emotionally intense ties) for information flow, a topic that was picked up about 20 years later by Burt (1992) with the idea of "structural holes" (p. 65). Regarding managerial research, Mintzberg (1975) articulated the interpersonal role of managers as one of building and maintaining organizational relationships at work in order to establish an effective individual organizational information system. Later, empirical research identified networking as crucial for the salary progression (Gould & Penley, 1984) and promotion (Luthans, Rosenkrantz, & Hennessey, 1985) of managers, thereby shifting the focus toward networking as an individual career strategy.

Defining networking behavior

Gould and Penley (1984) also provided one of the first definitions of networking, describing it as "the practice of developing a system or 'network' of contacts inside and/or outside the organization, thereby [providing] relevant career information and support for the individual" (p. 246). Jumping forward in time, a recent definition stems from a theoretical networking paper by Porter and Woo (2015), characterizing networking as "strategic processes by which one initiates an instrumental relationship [...] with a contact capable of providing interpersonal resources that are beneficial for work-related activities" (p. 1485). Based on a review of historical definitions, Gibson et al. (2014) recently presented an integrated consensus definition of networking: "Networking is a form of goal-directed behavior which occurs both inside and outside of an organization, focused on creating, cultivating, and utilizing interpersonal relationships" (p. 150).

Drawing from these definitions, networking can be characterized as a set of particular behaviors (see also Wolff et al., 2008). These behaviors are focused on the short-term goal of building and establishing interpersonal relationships (that in their entirety consolidate in a person's network) to obtain work-related resources. In the long term, these resources might be leveraged for work and career success (cf. Consequences of networking behavior).

Measuring networking behavior

Early research by Mintzberg (1975), Kotter (1982) and Luthans et al. (1985) used participant observation to assess managerial networking behavior. These days, most research relies on some form of quantitative self-reports about the frequency of an individuals' networking behavior (for an overview, see Wingender & Wolff, 2016). In a recent study, Casciaro and colleagues (2014) captured networking behavior one-dimensionally with a single item ("How often do you engage in professional networking?"). In contrast, the most complex multi-dimensional networking scales comprise five³ or six⁴ subscales and up to 44 items (Forret & Dougherty, 2001; Wolff & Moser, 2006). In these surveys, respondents indicate how often they have engaged in the listed behaviors in the past (e.g., within the past year, Forret & Dougherty, 2001). Examples of networking behaviors from networking surveys include: Introducing oneself to people who can influence one's career (Sturges, Guest, & Conway, 2002) and giving out

³ Forret and Dougherty (2001) used exploratory factor analysis to identify five networking dimensions: 1) maintaining contacts, 2) socializing, 4) engaging in professional activities, 4) participating in church and community, and 5) increasing internal visibility.

⁴ Wolff & Moser (2006, English version: Wolff, Schneider-Rahm, Forret, 2011; shortened 18-item versions: Wolff, Spurk, & Teeuwen, 2017 and Porter, Woo, & Campion, 2016) used a theoretical approach to distinguish between two facets. The structural facet differentiates between internal and external networking. The functional facet discerns building, maintaining, and using contacts. Crossing the two facets results in six networking subscales.

business cards (Forret & Dougherty, 2001), going out for lunch, dinner or drinks with people from other work units (Forret & Dougherty, 2001; Michael & Yukl, 1993) as well as exchanging gossip or strategic information (Gould & Penley, 1984; Wolff & Moser, 2006) like advice or leads regarding job search (Wanberg, Kanfer, & Banas, 2000).

Antecedents of networking behavior

Networking research has investigated numerous determinants of networking behavior. I broadly group antecedents of networking behavior in individual, demographic and organizational antecedents (cf. Wolff et al., 2008).

Individual antecedents

With regard to individual antecedents, I organize variables into three categories: a) personality traits, b) skills, and, c) attitudes (see Table 2). First, in terms of personality traits, several studies have investigated the relationship between networking behavior and complex personality models. As such, agency and communion (the Big Two, Paulhus & Trappnell, 2008) are two dimensions representing two fundamental challenges: getting ahead and getting along (Helm, Abele, Müller-Kalthoff, & Möller, 2017; Bruckmüller & Abele, 2013). Agency comprises characteristics that are aimed at pursuing goals and manifesting accomplishments (also referred to as dominance or competence). Communion comprises characteristics that are related to forming and maintaining social connections (also referred to as affiliation or warmth, Fiske, Cuddy, Glick, & Xu, 2002; Wiggins, Trapnell & Phillips, 1988). Using the interpersonal circumplex, Wolff and

Muck (2009) showed that both dominance and affiliation are related to networking behavior, thus emphasizing that networkers are friendly and determined at the same time.⁵

Further studies have investigated the relationship between networking behavior and personality on the basis of the Big Five model (Costa & McCrae, 1995). Extraversion and agreeableness are more closely related to interpersonal behavior than the remaining factors (openness to experience, emotional stability and conscientiousness, Hurley, 1998). Extraversion combines agentic and communal aspects (Hurley, 1998), with extraverts being characterized as assertive and action-oriented as well as warm and person-oriented (Costa & McCrae, 1995). Extraversion consistently shows positive relations to networking behavior (Forret & Dougherty, 2001; van Hove et al., 2009; Wanberg et al., 2000; Wolff & Kim, 2012; Wolff & Moser, 2006). Likewise, agreeableness, as pointing to communion, is related to networking behavior (Wanberg et al., 2000; Forret & Dougherty, 2001). However, taking a more nuanced look, agreeableness is related only to internal networking, but not external networking (Wolff & Kim, 2012). Several studies show that openness to experience, emotional stability and conscientiousness show heterogeneous relationships with networking behavior (e.g., Ferris et al., 2005; Wanberg et al., 2005; Wolff & Kim, 2012).

Other studies have investigated relationships of networking behavior with single personality traits. For example, people with high interpersonal trust expect their interaction partners to have good intentions and fulfill the norms of reciprocal exchange, thus facilitating networking behavior, particularly building new contacts (Wolff & Moser, 2006). Furthermore, networking behavior is positively related to proactivity (Thompson, 2005). In general, proactivity

⁵ Similarly, building on McClelland's (1987) implicit motives framework, networking behavior is associated with high need for competence, need for affiliation, and need for power (Wolff, Weikamp, & Batinic, 2014, see also Porter, Woo, Alonso, & Snyder, 2018).

reflects the extent to which individuals take action to influence their environments (Bateman & Crant, 1993) and bring about goal-oriented action and accomplishment (Ferris et al., 2007). As such, “proactive people are likely to seek ways to construct a social environment conducive to their own success on the job” (Thompson, 2005, p. 1012). Likewise, self-esteem shows a positive correlation with networking behavior (Forret & Dougherty, 2001). Self-esteem refers to how favorably individuals evaluate themselves (Brockner, 1988). Individuals with low self-esteem might be more likely to withdraw from esteem-threatening situations (Brockner, 1988; Campbell, 1990), such as engaging in networking behaviors (Forret & Dougherty, 2001). They might feel they have nothing worth contributing to others, whereas individuals with high self-esteem tend to believe that they have valuable resources to exchange with others and that they could satisfy the norm of reciprocity needed for effective networking relationships (Forret & Dougherty, 2001). Also, networking behavior is associated with high levels of self-monitoring (Ferris et al., 2008, see also Fang, Landis, Zhang, Anderson, Shaw, & Kilduff, 2015). High self-monitors tend to “monitor or control the images of the self they project in social interaction to a great extent” (Snyder, 1987, p. 5) in order to successfully reach interpersonal ends (Gangestad & Snyder, 2000).

Second, along with personality traits, social skills have been found to determine networking behavior (Hager, 2015). That is, socially skilled individuals are able to “perceive interpersonal or social cues, integrate these cues with current motivations, generate responses, and enact responses that will satisfy motives and goals” (Norton & Hope, 2001, p. 59). People with high social skills can encourage cooperation among others (Fligstein, 2001) and can influence the actions of others through the effective use of persuasion (Argyle, 1969). A study with entrepreneurs reveals that political skills, closely related to the construct of social skills, enhance the construction and use of entrepreneurial networks (Fang, Chi, Chen, & Baron, 2015). Political

skills are a social competence that enables individuals to achieve goals due to their understanding of and influence upon others at work (Ganssen-Amman, Meurs, Wihler, & Blickle, 2017). More specifically, political skills reflect personal competency in social interactions (i.e., social astuteness and networking ability; Ferris et al., 2005, 2007) and refer to proficiency at applying situationally appropriate behavior and tactics to influence others (i.e., apparent sincerity and interpersonal influence; Ferris et al., 2005, 2007), especially in highly uncertain environments (Fang, Chi, Chen, & Baron, 2015).

Third, attitudes influence individuals' networking behaviors. For example, networking comfort (attitudes toward using networking as a job-search method) is positively related to networking intensity (Wanberg et al., 2000). In a similar vein, with regard to moral concerns, a survey study of lawyers offers correlational evidence that professionals who do not experience "feelings of dirtiness from instrumental networking" (Casciaro et al., 2014, p. 705), relative to those who do, tend to engage in it more frequently. Likewise, favorable attitudes toward workplace politics (i.e., evaluating politics as good, fair, and necessary means to reach their ends, Forret and Dougherty, 2001) and positive attitudes towards professional networks (Kastenmüller et al., 2011) show a positive relationship with networking behavior.

Taken together, research shows that people who frequently engage in networking have certain personality traits (e.g., extraversion) and skills (e.g., social skills). Also, networking behavior correlates with positive attitudes towards networking behavior and related constructs. It seems likely that these factors determine networking behavior. However, strictly speaking, the predominantly correlational study designs do not allow reliable causal conclusions. For example, regarding proactivity, networking behavior might as well facilitate an employees' initiative taking. That is, professional contacts might serve as key sources for information and feedback that

ultimately bolster employees' confidence in their ability to be proactive. Therefore, alternative research designs, such as experimental or longitudinal studies, would allow for stronger causal inferences regarding the role of individual differences in the context of networking behavior (cf. Shadish, Cook, & Campbell, 2002). Also, it might be interesting if individual differences such as personality factors moderate the relationship between networking behavior and its consequences.

Table 2

Individual Antecedents of Networking Behavior

Personality traits	Agency (e.g., Wolff & Muck, 2009)
	Communion (e.g., Wolff & Muck, 2009)
	Extraversion (e.g., Wolff & Kim, 2012)
	Agreeableness (e.g., Wanberg et al., 2000)
	Interpersonal trust (e.g., Wolff & Moser, 2006)
	Proactivity (e.g., Thompson, 2005)
	Self-Esteem (e.g., Forret & Dougherty, 2001)
	Self-Monitoring (e.g., Ferris et al., 2008)
Skills	Social skills (e.g., Hager, 2015)
	Political skills (e.g., Fang, Chi, Chen, & Baron, 2015)
Attitudes	Networking comfort (e.g., Wanberg et al., 2000)
	Low moral concerns regarding instrumental networking (e.g., Casciaro et al., 2014)
	Positive attitudes towards workplace politics (e.g., Forret & Dougherty, 2001)
	Positive attitudes towards occupational networks (e.g., Kastenmüller et al., 2011)

Demographic antecedents

Research on demographic variables reveals heterogeneous and mostly small relationships with networking behavior (cf. Wolff et al., 2008). Several studies find no relationships between networking behavior and gender (Forret & Dougherty, 2001; Sturges et al., 2002; Wanberg et al., 2000; Wolff & Moser, 2006), age or education (Gould & Penley, 1984; Sturges et al., 2002; Wanberg et al., 2000; Wolff & Moser, 2006).

Excursus on organizational antecedents

Research on relationships between networking and organizational antecedents is relatively scarce, even though it is plausible that organizational factors determine networking behavior. Wingender and Wolff (2016) argue that situational antecedents of networking might seem less relevant to scholars due to the primary research focus on networking behavior as an individual career strategy. Scholars implicitly assume that an individuals' career is predominantly determined by him or herself and not by his or her organizations. The few existing studies show that, for example, networking behavior is positively related to higher hierarchical level and certain functional positions (e.g., marketing and sales, e.g., Forret & Dougherty, 2001; Michael & Yukl, 1993).

Consequences of networking behavior

Networking relationships

In the first place, networking behavior is focused on interpersonal relationships (Gibson et al., 2014). Building, maintaining, and using relationships represents a dynamic process of consecutive stages of relationship development (Porter & Woo, 2015). In the literature, networking

relationships are characterized as follows: They can occur both inside and outside an individuals' core organization (Michael & Yukl, 1993). They are typically considered to be informal, that is, "other than the manager's immediate superior and subordinates" (Orpen, 1996, p. 245), or to exceed formal role expectations, for example, when playing golf with a colleague. Networking contacts might be referred to as "business friend[s]" (Ingram & Zou, 2008, p. 167; see also Chua, Ingram, & Morris, 2008). Along these lines, professional and personal aspects can overlap significantly, with task goals and personal goals coexisting within the same social relationships (Casciaro & Lobo, 2008). However, purely personal relationships that lack any instrumental goals or functions are not considered networking ties (Ingram & Zou, 2008). Networking relationships are typically governed by norms of reciprocity (Gouldner, 1960, e.g., the proverbial "owing a favor") and therefore based on trust (Coleman, 1988; Wolff & Moser, 2006) because favors do not always occur simultaneously.

Network

Networks address the "structure of relationships" (Porter & Woo, 2015, p. 1478). That is, professional networks comprise the entirety of an actor's networking relationships. Research on networks (e.g., Dobrow & Higgins, 2005) analyzes characteristics of networking relationships (e.g., strength), network positions (e.g., centrality), and network size and structure (e.g., diversity). The availability of resources engendered by structure and quality of an individuals' network refers to the concept of social capital (Adler & Kwon, 2002; Coleman, 1988). As for networking relationships, strong ties are necessary for obtaining complex knowledge at work (Hansen, 1999). On the other hand, weak ties provide helpful information regarding job search (Granovetter, 1974). Likewise, positional advantages, such as broker positions (bridges between distinct groups within

the network, also known as structural holes) entail informational and strategic benefits (Burt, 1992). Regarding network size and structure, large and diverse networks allow access to instrumental resources, such as task advice and strategic information (Podolny & Baron, 1997). The relationship between networking behavior and network structure is presumably reciprocal. Hence, networking behavior should lead to favorable network structures. Accordingly, Wolff and Moser (2006) show that networking behavior is related to large and non-redundant professional networks. This network structure, in turn, likely creates further networking opportunities (e.g., van Hove et al., 2009).

Networking resources

In their literature review, Porter and Woo (2015) suggest that “access to interpersonal resources is a common reason ‘why’ people network” (p. 1490). As Dobos (2015) states: “People network for all kinds of reasons. It might be to find business partners and collaborators. It might be to gain industry knowledge. It might be to keep abreast of opportunities in the hidden (or poorly advertised) job market” (p. 10). In an attempt to organize the volume of networking resources, Volmer and Wolff (2017, based on Wolff et al., 2008) classify networking resources into proximal and distal resources.⁶ Proximal resources (e.g., task advice) are mostly available from dyadic relationships, whereas distal resources (e.g., career success) are available from a (large and diverse) professional network rather than from a single relationship (cf. Wolff et al., 2008). The relationship between networking behavior and distal resources is most likely mediated by proximal resources, such that accumulated proximal resources eventually aggregate into distal resources. For example, an employee might request information from different contacts that, later on, he or

⁶ Wolff et al. (2008) originally used the terms “primary and secondary resources” (p.110).

she uses when negotiating his or her salary or seeking a promotion. Accordingly, distal resources should result rather in the long term than in short-term (Wingender & Wolff, 2016). In support of this assumption, Wolff and Moser (2010) found that building and maintaining internal networking contacts did not predict career success (i.e., being promoted) in the subsequent year, but one year later. Table 3 displays an overview of proximal and distal networking resources that have been mentioned in the networking literature, but not necessarily studied scientifically. Notably, this list is not intended to be exhaustive.

Porter and Woo (2015) consider resources based on the particularistic-universalistic dimension (Foa & Foa, 1980), ranging from friendship (particularistic) to money (universalistic), with networking resources falling in between these ends. Due to Porter and Woo's (2015) focus on dyadic networking relationships, their understanding of networking resources corresponds broadly to the above concept of proximal resources. Furthermore, in line with Volmer and Wolff's (2017, see also Wolff et al., 2008) idea of distal resources, they argue that networking resources bolster one's perceived and actual ability to attain desirable work and career outcomes (i.e., distal resources). Upon reviewing existing networking research, Porter and Woo (2015) identify three networking outcomes that have attracted major attention in networking research: job search, work performance, and career success. Considering those outcomes in light of the classification into proximal and distal resources, it is striking that all refer to distal resources. In contrast, relatively little research attention has been directed towards proximal networking resources. In the following, I describe the three resources emphasized by Porter and Woo (2015) in more detail. I also elaborate on entrepreneurial success because a large part of the sample in Study 3 consists of entrepreneurs. Furthermore, I undertake a short excursus on organizational success.

Table 3

Networking Resources from the Literature

Proximal resources	Strategic information (e.g., Podolny & Baron, 1997)
	Task advice (e.g., Michael & Yukl, 1993)
	Coworker support (e.g., Burke, 1984)
	Ideas (e.g., Burke, 1984)
	Feedback (e.g., Burke, 1984)
	Cut red tape (e.g., Burke, 1984)
Distal resources	Job search success (e.g., Porter & Woo, 2015)
	Work performance (e.g., Porter & Woo, 2015)
	Salary (e.g., Wolff & Moser, 2009)
	Promotion (e.g., Wolff & Moser, 2010)
	Career satisfaction (e.g., Wolff & Moser, 2009)
	Entrepreneurial success (e.g., Brüderl & Preisendörfer, 1998)
	Visibility (e.g., Wolff et al., 2008)
	Reputation (e.g., Wolff et al., 2008)
	Influence (e.g., Michael & Yukl, 1993)
	Power (e.g., Wolff et al., 2008)
	Organizational success (e.g., Wolff et al., 2008)

Job search success. “A contact is worth 2000 résumés” (Burke, 1984, p. 299). In this vein, networking behavior is considered a key to job search success (Forret, 2014). Scholars use a broad range of operationalizations of job search success, including job search outcomes (e.g., number of

job interviews and offers), employment outcomes (e.g., employment status, speed of reemployment), and quality of employment (e.g., job satisfaction, person-organization fit, see Forret, 2014). One of the first studies on networking behavior and job search outcomes in a large retail bank showed that individuals referred by personal contacts who were currently employed at the bank were significantly more likely to obtain job interviews and subsequent job offers (Fernandez & Weinberg, 1997).⁷ Likewise, in a study with unemployed job seekers, 36% reported that they had found a job through networking or personal contacts (Wanberg et al., 2000; see also Granovetter, 1995). Note, however, that in this study, networking behavior did not provide incremental prediction of reemployment when considering use of other job-search methods. In a longitudinal study with unemployed job seekers, time spent networking was positively related to the number of job offers (above and beyond other job search methods), but not with employment status (van Hove et al., 2009, see also Wanberg et al., 2000). Therefore, networking behavior seems to have a direct influence on proximal job search outcomes (e.g., job offers) whereas more distal outcomes (e.g., actual employment) might be determined by many factors other than networking behavior. Findings of a two-year prospective study showed that employees' networking with external contacts was positively associated with changing the employer in the second year (Wolff & Moser, 2010, see also Porter et al., 2016). Several studies suggest that weak ties might be particularly helpful in channeling job information (Bian, Huang & Zhang, 2015; Granovetter, 1974; van Hove et al., 2009) whereas strong ties are best able to mobilize forms of favoritism (Bian et al., 2015). In sum, networking behavior can be considered a helpful job search strategy (best used as a complement to other job-search methods, cf. Wanberg et al., 2000).

⁷ However, their operationalization of "personal contacts" (p. 883) includes close friends and relatives and is therefore not limited to networking contacts.

Work performance. Work performance is defined as behaviors or actions that are relevant to the goals of an organization (McCloy, Campbell, & Cudeck, 1994). Research on work performance broadly distinguishes task performance (directly related to the organization's technical core) from contextual performance (contributing to the social and psychological core of the organization, Motowidlo & Van Scotter, 1994). According to Porter and Woo (2015), research on the relationship between networking behavior and work performance conceptualizes networking as a practice that enables access to interpersonal resources that are necessary and useful for facilitating work performance. Indeed, studies reveal significant correlations between networking behavior and supervisor-rated performance evaluations (Shi, Chen, & Chou, 2011; Thompson, 2005). Likewise, networking behavior is positively related to self-reported task performance as well as contextual performance (Nesheim, Olsen, & Sandvik, 2017; see also Gevorkian, 2013). Also, a longitudinal study with salespersons in an insurance company shows that networking behavior significantly predicts objective measures of performance (e.g., sales volume, Blickle et al., 2012). Regarding boundary conditions, this study finds that networking operates most effectively in enterprising job contexts characterized by high levels of communication and interpersonal interactions.

Career success. Networking research has a very strong focus on career success, which is defined as the accumulated positive work and psychological outcomes resulting from one's work experiences (Seibert & Kraimer, 2001). Scholars use various measures of career success, broadly differentiating between objective and subjective career success (Ng, Eby, Sorensen, & Feldman, 2005). Objective career success includes indicators of career success that can be seen and evaluated objectively by others such as salary attainment and the number of promotions in one's career.

Measures of subjective career success capture individuals' subjective judgments about their career attainments such as job and career satisfaction. Networking is generally viewed as an essential behavior for career success, because resources obtained from networking relationships are assumed to leverage career success (Porter & Woo, 2015). Regarding objective career success, a recent meta-analysis finds that networking behavior is positively related to salary attainment ($k = 15$, $r = .17$, Ng & Feldman, 2014a). In a longitudinal study, Wolff and Moser (2009) showed that networking behavior is related to concurrent salary as well as to the growth rate of salary over time. Likewise, several studies found positive relations between networking behavior and promotions (Blickle, Witzki, & Schneider, 2009; Forret & Dougherty, 2004; Luthans et al., 1985). Also, findings of a two-year prospective study showed that networking behavior predicted promotions, both in the first and second year (Wolff & Moser, 2010). With regard to subjective career success, meta-analytical findings indicate a positive correlation of networking behavior and career satisfaction ($k = 16$, $r = .24$, Ng and Feldman, 2014b, see also Forret & Dougherty, 2004; Wolff & Moser, 2009).

Entrepreneurial success. The network approach to entrepreneurship (Aldrich & Zimmer, 1986; see also Brüderl & Preisendörfer, 1998) is a prominent theoretical perspective within the literature on entrepreneurship. According to the Network Founding Hypothesis, entrepreneurs rely on networking activities and resources from networking contacts (e.g., information on market conditions) in order to successfully establish new firms (Burt, 1992; Brüderl & Preisendörfer, 1998). Concerning processes after founding, there is a similar hypothesis (Network Success Hypothesis), suggesting that entrepreneurs who engage in networking behaviors and can refer to a broad and diverse social network are more successful (Brüderl & Preisendörfer, 1998). Empirical

research addressing the relationship between networking and entrepreneurial success, however, has produced inconclusive results. Most studies find a positive effect (e.g., Baum, Calabrese, & Silverman, 2000; Brüderl & Preisendorfer, 1998; Raz & Gloor, 2007; Semrau & Sigmund, 2012; Stam & Elfring, 2008), but some studies indicate null effects (e.g., Aldrich & Reese, 1993). These heterogeneous results might be traced back to the broad variety of networking measures (e.g., time spent networking, frequency of communication with specific networking partners; Witt, 2004), which differ from the typical assessment of networking behaviors (cf. Measuring networking behavior). Also, scholars use diverse criteria for entrepreneurial success (e.g., company survival, sales growth, profitability, return on investment; Witt, 2004). Furthermore, a study suggests that for entrepreneurs, increasing network size and relationship quality results in diminishing marginal returns in terms of access to financial capital, knowledge and information, and additional business contacts (Semrau & Werner, 2013). In line with resource theories such as COR, this finding might be explained by a general “threshold for some resources after which having more is not advantageous but still requires energy and effort” (Hobfoll, 2002, p. 316).

Excursus on organizational success. Fandt and Ferris (1990) argue that some employee behaviors that are mainly self-interested such as networking behavior might also have an impact on organizations.⁸ Yet, research on organizational consequences of networking behavior is relatively scarce. The few studies that exist suggest that, from an organizational perspective, employees’ networking behaviors can be either beneficial or detrimental. For example, an employees’ networking with internal contacts is positively related to his or her normative

⁸ For entrepreneurs, individual and organizational success are intrinsically tied to one another (e.g., company survival).

commitment, whereas networking with contacts outside an employees' organization shows negative relations with normative commitment (McCallum, Forret, & Wolff, 2014). Similarly, a longitudinal study suggests that an employees' internal networking decreases his or her likelihood to leave the organization, whereas an employees' external networking behavior significantly relates to turnover (Porter et al., 2016; see also Wolff & Moser, 2010). Taken together, from an organizational perspective, an employees' internal networking is beneficial in terms of employee commitment, whereas external networking also comes at disadvantages for the core organization (e.g., reduced commitment, increased turnover).

What we need to know

The literature review reveals that existing networking research provides answers to the following questions: First, how is networking behavior defined and measured? In the networking literature, networking behavior is defined as goal-directed behavior focused on building, maintaining, and using informal relationships (Gibson et al., 2014). It is typically measured with networking surveys, asking individuals how often they have engaged in networking behavior in the past (e.g., Forret & Dougherty, 2001). Second, what are individual antecedents of networking behavior? Research suggests that personality factors (e.g., extraversion, Forret & Dougherty, 2001) and skills (e.g., social skills, e.g., Hager, 2015) as well as attitudes (e.g., networking comfort, Wanberg et al., 2000) determine networking behavior. And finally, what are consequences of networking behavior? In general, networking behavior is considered to pay off by providing instrumental resources such as task advice and strategic information (Podolny & Baron, 1997). In the long term, these resources should translate into work and career benefits (cf. Wolff et al., 2008). Indeed, studies find that networking behavior is related to criteria of job search success (e.g., job

offers, van Hove et al., 2009), improved work performance (e.g., task performance, Nesheim et al., 2017) and career success (e.g., Wolff & Moser, 2010).

Accordingly, research has a strong focus on consequences that are rather long-term, mostly work-related and almost exclusively positive, particularly career success. That way, however, scholarly understanding of networking behavior remains limited in at least three ways. First, as networking research predominantly focuses on long-term consequences, it remains unclear how networking behavior affects people in the *short-term*. That is, most studies rely on cross-sectional data, whereas the few longitudinal studies have relatively long periods between data collections. Typically, in these studies, networking behavior is conceptualized in a rather static way by asking individuals to estimate how often they have shown networking behaviors in the past months or year (e.g., Forret & Dougherty, 2001). Likewise, criteria are typically measured in a static and aggregated manner (e.g., number of promotions received at a given point in time, cf. Wolff & Moser, 2010). Second, previous studies have mainly focused on work-related outcomes of networking behavior. However, networking might also affect *personal* outcomes, thus transcending the workplace and entering into people's private lives. Third, in recent years, scholars have occasionally begun to criticize the prevailing research focus on positive consequences of networking behavior, instead suggesting that it might also have negative consequences (e.g., Wolff et al., 2008). However, thus far, little is known about potential *costs* of networking behavior. For example, participants of a networking training reported in feedback sessions that they had realized "that networking isn't as easy as it looks [...] and that it requires [...] sincere effort" (de Janasz & Forret, 2008, p. 640). This implies that people must "commit their emotional, mental, or physical resources and energy toward networking" (Kuwabara, Hildebrand, & Zou, 2016, p. 9) which might consequently leave people with depleted resource reservoirs.

Filling these gaps is crucial to understand how people directly experience their networking behavior. That is, to get granular on processes of networking behavior. Further, integrating personal as well as detrimental effects of networking behavior extends the scope of existing networking research. Gaining knowledge about personal costs of networking behavior might help people to come to more informed decisions about whether and how to use networking as a career management strategy. Furthermore, it might help explain why some people typically shy away from networking even while acknowledging how important effective networks are for career success. I seek to tackle those research gaps by adopting a resource-theoretical approach toward networking behavior in order to develop an integrated model of networking behavior and its effects on energy resources and attitudinal and productive outcomes.

Resource Theories

Resources are described as central in the networking literature. Therefore, it is surprising that scholars in the field of networking research have not yet drawn extensively on resource theories. I seek to break new ground in networking research by taking a resource-theoretical perspective on networking behavior. In developing a model of networking behavior, energy resource processes, and outcomes, I build upon two well-established resource theories: That is, conservation of resources (Hobfoll, 1989, 2001) and ego depletion (Baumeister et al., 1998) theory.

Conservation of resources theory

The conservation of resources theory (Hobfoll, 1989, 2001) originates from the stress literature and explains how resource loss and gain are linked to stress and well-being (Hobfoll, 2002). COR is one of the most influential integrative resource theories and has been applied broadly in the organizational literature (cf. Halbesleben et al., 2014; Hobfoll, 2011), for instance, to explain burnout (e.g., Hobfoll & Freedy, 1993; Lee & Ashfort, 1996). Despite its popularity, several criticisms have emerged recently, primarily related to resources — the core concept of COR (cf. Halbesleben et al., 2014). Addressing these critiques, in recent years several scholars have provided new directions for COR (e.g., Halbesleben et al., 2014; ten Brummelhuis & Bakker, 2012).

In the following, I approach four aspects of COR that provide the basis for developing a theoretical model of networking behavior, energy resource processes, and outcomes. First, I address COR's definition and classification of resources. Based on COR's resource classification, I specify the type of resources that I seek to bring into focus (i.e., energy resources). Second, I

depict COR's principle of resource investment and how resource investments can implicate processes of resource drain and resource gain. Drawing from this principle, I conceptualize networking as a resource investment behavior, which should consequently lead to drain and gain of energy resources. Third, I elaborate on outcomes of resource drain and gain in order to build a basis for predicting outcomes of networking behavior and related energy resource processes. The final aspect I address is the measurement and study of resource changes in the context of COR. Thereby, I focus on a more recent innovative measurement strategy which I also adopted in the present work.

Hobfoll (2002) loosely defines resources as “those entities that either are centrally valued in their own right (e.g., [...] health [...]) or act as means to obtain centrally valued ends (e.g., [...] social support)” (p. 307). However, this definition has been criticized in several ways: First, though Hobfoll (2001) expressly states that his definition attempts “to avoid the slippery slope of devaluing resources until everything that is good is a resource” (p. 360), his resource definition is broad (cf., Gorgievski, Halbesleben, & Bakker, 2011; Thompson & Cooper, 2001). Thus, nearly anything “good” can be a resource. Second, using the term “value” implies that a resource must lead to a positive outcome in order to be a resource, thus confounding the resource with its outcome (Halbesleben et al., 2014). Addressing this critique, Halbesleben et al. (2014) recently refined resources as “anything perceived by the individual to help attain his or her goals” (p. 1338). Notably, in this goal-based definition, the emphasis is on the perception that a resource could help an individual attain a goal, not on the perception that a resource was actually successful in facilitating goal attainment. Therefore, resources are decoupled from their outcomes. In this vein, the refined definition of resources helps to clarify the notion of value. However, the goal-based definition “remains necessarily vague due to its dependence on understanding of an individuals’

goals” (Halbesleben et al., 2014, p. 1339). This still means that nearly anything could be a resource if someone thinks it could help him or her meet a goal. As a result of these broad definitions, resources have been interpreted in a wide variety of ways in the literature (for an overview, see Halbesleben et al., 2014).

Organizing the volume of resources listed in the literature and deliberating on resource processes is aided by distinguishing between different types of resources. Early on, Hobfoll (1988, 2002) classified resources into four superordinate categories: objects (e.g., a car), conditions (e.g., career success), personal characteristics (e.g., skills), and energies (e.g., cognitive energy). This original four-fold categorization was then refined into a two-by-two grid based on two dimensions: Source (contextual vs. personal resources) and transience (structural vs. volatile resources, ten Brummelhuis and Bakker, 2012). In terms of source, contextual resources can be found in the social environment of an individual, whereas personal resources include personal characteristics and energies. Regarding transience, structural resources are relatively stable and tend to last for longer, whereas volatile resources are more fleeting (ten Brummelhuis & Bakker, 2012). A typology of resources, based on a combination of the two dimensions is presented in Figure 2.

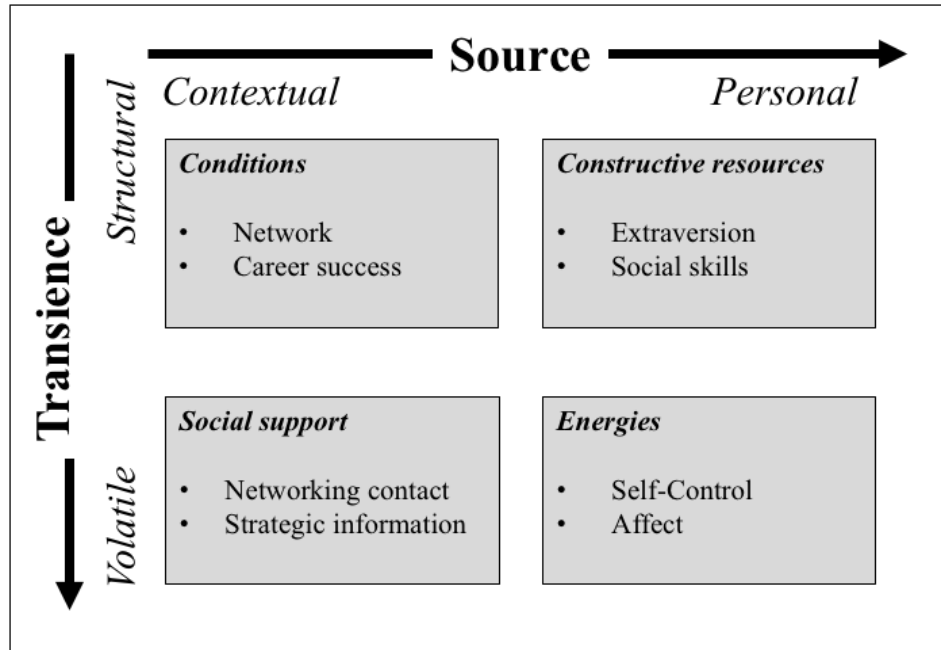


Figure 2. Categorization of resources.

Based on ten Brummelhuis and Bakker (2012) and Hobfoll (1988, 2001).

First, conditions⁹ (e.g., network, career success) are positioned in the upper left quadrant because they are durable resources found in social contexts. Research shows that networking behavior is related to beneficial conditions, such as a large and diverse network or career success. Second, the lower left quadrant, which is labeled “social support” represents volatile resources offered by others. Such resources are found in the social context, but are more transient than conditions. Networking behavior is focused on obtaining a specific form of social support, that is, instrumental support (e.g., strategic information, task advice). Third, structural personal resources can be found in the upper right quadrant. They are labeled constructive resources and comprise personality traits and skills. Constructive resources (e.g., extraversion, social skills) have been

⁹ Note that the concept of conditions is comparable to Volmer and Wolff’s (2017) idea of distal resources, whereas social support is similar to proximal resources (cf. Networking resources).

mainly considered as determinants of networking behavior. Fourth, energies (e.g., self-control,¹⁰ affect) are placed in the lower right quadrant, reflecting the fact that they are highly volatile resources inherent in a person. There are also qualitative differences between different types of energy resources (ten Brummelhuis & Bakker, 2012): Some energies are finite in that, once they are used, they cannot be re-used for other purposes (e.g., self-control). Other energies are temporal, thus reflecting psychological states that come and go (e.g., affect). Scholarly understanding of relationships between networking behavior and energies is relatively scarce. This is surprising given that energies can have considerable downstream effects on various outcomes such as well-being and performance (cf. Hobfoll, 2001; ten Brummelhuis & Bakker, 2012). Therefore, in the present work, I focus on the energy effects of networking. More specifically, I investigate how networking behavior simultaneously depletes and generates energy resources.

COR postulates the basic tenet that individuals strive to obtain, retain, foster, and protect resources (Hobfoll, 1989, 2002). That is, people seek to protect their current resources and acquire new resources. As an extension of the basic tenet, COR postulates the principle of resource investment. This principle suggests that people invest resources in ways that they believe will maximize their returns and help them achieve goals (Hobfoll, 2001). The concept of resource investment was first put forth by Schönpflug (1985). In a series of experimental laboratory studies, he illustrated that individuals have to expend resources to achieve goals and that such employment often depletes these resources. Schönpflug (1985, see also Hobfoll, 1989) concluded that goal-directed actions, although committed to taking advantage, might actually yield disadvantages in

¹⁰ Note that ten Brummelhuis and Bakker (2012) label the quadrant “energies”. A subform of energies is physical and cognitive energy. To avoid confusion, I do not use the term energy for cognitive energy, but refer to a specific form of cognitive energy, that is, self-control (cf. Baumeister et al., 1998).

terms of depleted resources. In this vein, many resource investments probably involve both drain and gain of resources (cf. Halbesleben et al., 2014; e.g., Ng & Feldman, 2012; Koopman, Lanaj, & Scott, 2016).

I consider networking a “resource investment behavior” (Halbesleben & Wheeler, 2015, p. 1628), which consequently involves both drain and gain of energy resources. That is, people invest energy resources in networking behavior in order to obtain resources (e.g., task advice) and achieve long-term goals (e.g., career success). If the invested resources, however, are depletable, their investment comes at a price (Hobfoll, 1989, 2002). One such depletable energy resource is self-control (Baumeister et al., 1998) and networking potentially requires and thus depletes self-control resources (cf. Ego depletion theory). Therefore, in the short-term, networking behavior might result in a self-regulatory *energy resource drain*. Furthermore, COR emphasizes that personality can serve as a resource, which influences the process of resource loss (Hobfoll, 2002; Hobfoll et al., 1990). Hence, it seems likely that certain personality factors might buffer against the effect of networking behavior on energy resource drain.

On the other hand, COR theory emphasizes the strategic nature of resource investment: When individuals decide to invest resources, they believe that their resource investment yields resource gain (Hobfoll, 2001).¹¹ Thus, when people invest energy resources into networking, they expect these investments to pay off, either immediately or in the future. This (anticipated) gain of resources should also be manifested by enhanced affective energy resource states. In this vein,

¹¹ Note that the value of a specific resource is defined as “the willingness of an individual to invest current resources” (Halbesleben et al., 2014, p. 1344) to acquire this specific resource. Thus, the resources individuals seek to gain should have more value to them than the resources invested.

networking behavior might also result in an affective *energy resource gain*. Taken together, networking behavior might simultaneously deplete and generate energy resources.

Outcomes of resource drain and gain processes can be distinguished as productive and attitudinal outcomes (Cohen & Bailey, 1997; see also ten Brummelhuis & Bakker, 2012). Productive outcomes refer to the efficient and effective creation of products and services, such as efficiency or meeting targets. Attitudinal outcomes refer to feelings and beliefs that are valued by the employee and the employer, such as low feelings of work-home conflicts or improved work-related well-being (cf. ten Brummelhuis & Bakker, 2012). In general, COR theory has a strong focus on linking resource changes to well-being (Halbesleben et al., 2014; Hobfoll, 2002; ten Brummelhuis & Bakker, 2012). Well-being is commonly viewed as a broad umbrella term that refers to all different forms of evaluating important aspects of one's life (e.g., work) or emotional experience such as emotional exhaustion or work satisfaction (Diener et al., 2017). Perceived or actual resource loss results in impaired well-being (burnout, e.g., Lee & Ashforth, 1996). In contrast, (perceived) resource gain leads to improved well-being because resources "facilitate well-being indirectly by allowing individuals to pursue and attain important goals" (Diener, Suh, Lucas, & Schmidt, 1999, p. 284). Assuming that networking behavior results in short-term energy resource drain and gain, a crucial question is how networking behavior further influences attitudinal (e.g., work-related well-being) as well as productive (e.g., work performance) outcomes.

Early on, Hobfoll, Lilly, & Jackson (1992; see also Hobfoll, 1998) created an instrument (COR-E) listing 74 resources. People rate whether they have experienced either actual loss or threat of loss for each resource listed within a specified period of time. However, COR-E has been utilized in very few studies (e.g., Davidson et al., 2010; Wells, Hobfoll, & Lavin, 1997): Its length,

repetitions, and the irrelevance of many of the resources to the focus of any given study have limited its use (Halbesleben et al., 2014). A more common and efficient strategy has been to determine and measure a small subset of resources that are most relevant to the study (Halbesleben et al., 2014; e.g., networking resources, cf. Table 3). However, simply examining changes in a specific resource might fall short because “the value of resources varies among individuals and is tied to their personal experiences and situations” (Halbesleben et al., 2014, p. 1335). Therefore, the selection of any specific resources, particular across occupations, seems problematic. Instead, Halbesleben et al. (2014) suggest that researchers should emphasize the subjective evaluation of resources that is inherent in COR theory. Therefore, another strategy to address resource changes has been to measure outcomes of resource loss or gain: Scholars have recently begun to treat indicators of psychological well-being as markers for a change in resources (e.g., Halbesleben et al., 2013; Janssen, Lam, & Huang, 2010; Lam, Huang, & Janssen, 2010). Research on intra-individual well-being finds that employees are sensitive to changes in resources that can occur over relatively short timeframes, such as over workdays or weekends (e.g., Halbesleben & Wheeler, 2015; Binnewies, Sonnentag, & Mojza, 2010; Fritz & Sonnentag, 2005). For example, a resource deficit finds expression in emotional exhaustion, whereas resource gain is reflected in work engagement as the “positive antipode of burnout” (Gorgievski & Hobfoll, 2008, p. 8). In the present work, by integrating outcomes of resource changes (e.g., well-being), I adopt this innovative research strategy for measuring resource changes.

To recapitulate, COR categorizes resources into four broad categories: conditions, social support, constructive resources, and energies. I focus on energy resources. I consider networking a resource investment behavior, which should lead to a self-regulatory energy resource drain and an affective energy resource gain. As COR states that personality influences resource loss,

personality factors might have an impact on energy resource drain through networking. Furthermore, networking behavior will probably affect outcomes such as work-related well-being and work performance.

Ego depletion theory

I seek to apply ego depletion theory to COR's resource investment principle. To recall, the resource investment principle suggests that people have to invest resources in order to gain resources. If the invested resources, like some energy resources, are finite and diminish with use, their investment might lead to resource depletion (Hobfoll, 2002). As illustrated by ego depletion theory, one such depletable energy resource is self-control (Baumeister et al., 1998). In this vein, it seems promising to apply a self-regulatory lens to COR's resource investment principle.

Ego depletion theory is, arguably, the most popular approach to understanding self-control and has gained considerable attention in the literature (cf. Hagger et al., 2016). Self-control refers to the capacity for actively guiding one's attention, emotions, impulses, and actions in order to bring them into line with standards (e.g., social expectations) and support the pursuit of goals (Baumeister et al., 2007). Self-control is required for all volitional behaviors demanding effortful control over automatic responses. According to the classic strength model, self-control depends on a generalized and finite resource (Baumeister et al., 1998, 2007). The major tenet of the strength model is that any investment of self-control consumes and temporarily depletes people's limited self-control resources. This state is referred to as "ego depletion" (Baumeister et al., 1998, p. 1252).¹²

I argue that networking behavior requires and thus depletes self-control resources. Networking is defined as goal-directed behavior (Gibson et al., 2014). Research shows that, generally speaking, guiding one's behavior towards a goal requires self-control resources (cf. Baumeister et al., 2007; e.g., Hofmann, Friese, & Roefs, 2009; Schönplflug, 1985; Sun & Frese,

¹² In line with the existing literature, I use the terms *ego depletion*, *resource depletion*, and *self-control depletion* as well as *self-control resources* and *self-regulatory resources* interchangeably.

2013; Wang, Tao, Fan, Gao, & Wie, 2015). More specifically, the goal of networking behavior is to build, maintain, and use professional relationships. Interacting with networking contacts, particularly when building new relationships, probably requires self-control because people have to listen carefully to process and organize the information retrieved (cf. Baumeister et al., 2007). In doing so, they might try to assess whether the networking partner has valuable resources to offer and what they could provide in return. In general, socializing in a workplace context is fundamentally different and much more effortful than socializing outside of work (Sonnentag, 2001; Trougakos, Hideg, Cheng, & Beal, 2014). Therefore, networking situations place high demands on monitoring and altering one's behavioral responses to conform to social norms in professional contexts. For example, it seems likely that people actively manage their emotions during networking interaction such as faking to enjoy a boring networking interaction or suppressing negative emotional responses towards an unpleasant contact. Managing emotions, however, depletes self-regulatory resources. For example, in one study, watching an emotionally evocative film while trying either to amplify or to stifle one's emotional response caused self-control depletion, as compared to watching the same film without trying to control one's emotions (Muraven, Tice, & Baumeister, 1998). Furthermore, in professional situations such as networking interactions (relative to friendship situations), people are particularly likely to present an advantageous self-image (Le Barbanchon, Milhabet, & Bry, 2016). That is, people seek to actively manage how they come across to their networking partners, also known as impression management (Leary & Kowalski, 1990).¹³ Selecting the image one wants to present and choosing the strategic behaviors by which one seeks to convey the desired impression also consumes self-regulatory

¹³ Following Leary and Kowalski (1990), I use the terms *self-presentation* and *impression management* interchangeably.

resources (e.g., Karremans, Verwijmeren, Pronk, & Teitsma, 2009; cf. Leary & Kowalski, 1990; Vohs, Baumeister, & Ciarocco, 2005). For example, an experimental study finds that self-control is impaired for participants who are instructed to appear both “likable and competent” (Vohs et al., 2005, p. 634) relative to those who are asked to present themselves naturally. Appearing likable and competent could approximate to the impression many individuals seek to make in networking situations in which “affect and instrumentality are deeply intertwined” (Bergemann, Iyengar, Ingram, & Morris, 2017, p. 3). Taken together, networking behavior encompasses several processes that consume self-regulatory resources, for example, managing one’s emotions and the impression one makes. Hence, engaging in networking behavior should result in a short-term drain of self-regulatory energy resources.

The basic approach to testing the ego depletion effect uses an experimental sequential-task paradigm, in which participants are randomly assigned to perform an initial task that either requires self-control or does not. After completing this first task, all participants complete a second unrelated self-control task. Assuming that self-control is a limited and universal resource, performing the first self-control task should deplete this resource — and therefore cause impaired performance on the second task (Baumeister et al., 2007). Research on tasks requiring self-control from the literature includes the following: overcoming automatic responses (e.g., Stroop task, Bertrams, Unger & Dickhäuser, 2011), resisting temptations (e.g., candy, Hofmann et al., 2007), and persevering at difficult or tiring tasks (e.g., squeezing a handgrip, Goto & Kusumi, 2014; for an overview, see Baumeister et al., 2007). Furthermore, in line with the theorizing that people experience subjective fatigue when mental resources are taxed (Cameron, 1973) several questionnaire measures exist, employing varying conceptualizations of an individuals’ energy

state (e.g., state self-control capacity, energy, depletion, fatigue, exhaustion, etc.; for an overview, see Trougakos et al., 2014).

Early laboratory evidence for depleted self-regulatory resources has been reported by Baumeister and colleagues (1998) and Muraven and colleagues (1998). Likewise, a meta-analysis of 198 independent tests (accounting for unpublished studies) found the overall effect significant with a moderate to large average effect size ($d = 0.62$, Hagger, Wood, Stiff, & Chatzisarantis, 2010). However, although supported by many studies, the validity of the ego depletion paradigm has recently become the subject of an ongoing, and unresolved, debate in the face of failed replications and concerns about publication bias (e.g., Carter & McCullough, 2014; Carter, Kofler, Forster, & McCullough, 2015; Hagger et al., 2016). Recently, a large-scaled multi-lab replication study with a single protocol failed to find any evidence for the ego depletion effect. However, the authors conclude that it “may be premature to reject the ego depletion effect altogether based on these data alone” (Hagger et al., 2016, p. 558) and call for further research to explore the ego depletion phenomenon (see also Baumeister & Vohs, 2016).

Another subject of debate in social psychology is the underlying mechanism of ego depletion. That is, recent theorizing has challenged the strength model and its idea of a limited self-control resource. In their process model of self-control, Inzlicht and Schmeichel (2012) alternatively suggest that initial self-control might induce shifts in motivation (away from self-regulation and toward self-gratification) and attention (away from cues signaling the need for control and toward cues signaling reward) that temporarily undermine self-control. In a similar vein, Kotabe and Hoffmann (2015) propose an integrative self-control theory, arguing that depletion affects effort-related processes via three mechanisms: a) increasing desire strength, b) decreasing control motivation, and c) decreasing control capacity. In this vein, both approaches

acknowledge that self-control at Time 1 reduces self-control at Time 2 but propose an alternative explanation for what happens between Time 1 and Time 2. That is, they emphasize motivational aspects relative to a lack of capacity, as suggested by the strength model of Baumeister et al (1998, 2007).

Generally speaking, the degree of specification of a theory should be adequate for its application. For example, “it is finer in general psychology and less fine in work psychology” (Frese & Zapf, 1994, p. 273). Based on this notion, I argue that in work and organizational psychology, research has a stronger focus on the effect itself than on breaking down the processes. Thus, I do not seek to shed further light on the underlying processes of ego depletion but instead look at the effect itself in the context of networking behavior. In this vein, even though the underlying mechanisms of the ego depletion effect have not yet been unraveled, I propose that networking behavior results in short-term self-control depletion.

Theoretical Model of Networking Behavior, Energy Resources, and Outcomes

Integrating the networking and resources literature, I seek to develop a model capable of explaining how networking behavior affects processes of energy resource drain (self-control depletion) and energy resource gain (positive affect) integrally. In this vein, I primarily focus on the question *How does networking behavior affect energy resources?* Additionally, the model provides answers to the following questions: *Who is more likely to experience resource drain through networking?* and, further, *How do networking behavior and energy resource processes affect attitudinal and productive outcomes?* The developed model serves as a basic framework for the ensuing empirical studies.

Considering networking research in the context of COR's resource categorization reveals that scholarly understanding of relationships between networking behavior and *energies* (e.g., self-control, affect) is relatively scarce. This is surprising, given that energies can have considerable downstream effects on various outcomes such as well-being and performance (Hobfoll, 2001; ten Brummelhuis & Bakker, 2012). Therefore, I focus on energy effects of networking behavior. Energies are defined as "highly volatile resources inherent in a person" (ten Brummelhuis & Bakker, 2012, p. 548).

Figure 3 illustrates the developed model of networking behavior and energy resource drain and gain, as well as attitudinal and productive outcomes. Networking behavior, which I depict as "resource investment behavior" (Halbesleben & Wheeler, 2015, p. 1628) is at the center of the model. Building on this, the model reflects two simultaneous main processes: The first is an *energy resource drain* process, describing networking behavior as a process in which self-regulatory energy resources are depleted. The resource drain process also explains how personality traits and skills mitigate resource drain. The second main process represents an *energy resource gain*

process, delineating how networking behavior leads to gain of affective energy resources. Further, networking behavior and resource drain and resource gain should lead to differentiated attitudinal and productive outcomes.

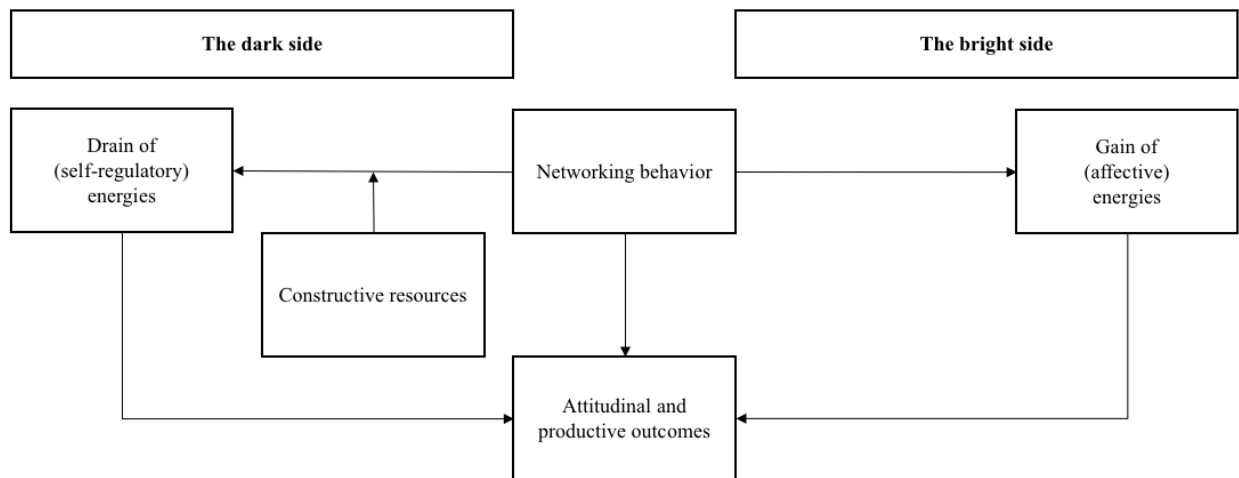


Figure 3. Theoretical model of networking behavior, energy resources, and outcomes.

First, I go into the dark side of networking behavior (Figure 3): That is, the energy resource drain process. COR's resource investment principle suggests that people strategically invest resources in attempts to translate them to other more highly prized resources (Hobfoll, 2001). Hence, the starting point for the resource drain process is the investment of energies while networking. The invested energy resources, however, might be finite and diminish with use, resulting in immediate resource depletion (Hobfoll, 2001). As demonstrated by ego depletion theory (Baumeister et al., 1998), self-control resources are depletable. Therefore, I apply ego depletion theory to COR's resource investment principle. I argue that networking behavior encompasses several processes that require self-control resources (e.g., goal-directedness, Wang et al., 2015; emotion regulation, Baumeister et al., 1998; impression management, Vohs et al.,

2005). Consequently, networking behavior should deplete self-control resources. Furthermore, I seek to identify boundary conditions of the proposed energy resource drain process. COR emphasizes that personality can serve as a resource which buffers the process of resource drain (Hobfoll, 2002; Hobfoll et al., 1990). Building on this, it seems likely that individual traits and skills (i.e., constructive resources) determine the extent of self-control depletion.

Second, I elaborate on the bright side of networking behavior (Figure 3): That is, the energy resource gain process. Energy resource gain processes likely begin with actual or anticipated gain of resources (e.g., building a new networking relationship or receiving strategic information) through networking. By definition, networking behavior is geared to building, maintaining, and using relationships (Gibson et al., 2014). According to COR, networking relationships represent a resource themselves (Hobfoll, 2002; ten Brummelhuis & Bakker, 2012, see also Granovetter, 1973). Additionally, using these relationships might provide further resources (e.g., strategic information), either immediately or in the future. In this vein, building a new relationship or utilizing a relationship means that a person gains a new resource or expects to gain a resource in the future, whereas maintaining a relationship corresponds to fostering an established resource (cf. Hobfoll, 2001). (Anticipated) gain of resources should also be manifested by enhanced affective energy resource states (Halbesleben et al., 2014). Building on this, I argue that networking behavior should lead to positive affect.

In line with COR, networking behavior and energy resource drain and gain should further lead to differentiated attitudinal and productive outcomes (Hobfoll, 2001; ten Brummelhuis & Bakker, 2012). Because I seek to emphasize how networking affects people's personal lives, I primarily focus on attitudinal outcomes (relative to productive outcomes such as work performance). Examples of attitudinal outcomes are feelings of work-home conflict and work-

related well-being. Building on the assumption that networking behavior depletes self-regulatory energy resources, it might further lead to increased feelings of work-life conflict (cf. ten Brummelhuis & Bakker, 2012). In contrast, because networking behavior should lead to a gain of affective energy resources, it should facilitate work-related well-being such as work engagement (Diener et al., 1999). In this vein, networking behavior is likely to result in negative as well as positive attitudinal outcomes.

To recapitulate, the proposed model emphasizes that networking behavior cuts both ways in terms of energies, as reflected by two main processes: The first describes how networking behavior drains self-regulatory energies and how this effect might be buffered by constructive resources. The other main process depicts how networking behavior leads to gain of affective energies, that is, positive affect. Further, networking behavior and energy resource drain and gain should result in differentiated attitudinal and productive outcomes.

Overview of the Studies

The developed model of networking behavior, energy resource drain and gain and attitudinal and productive outcomes is tested in four studies. That is, two experimental studies to investigate in a controlled laboratory setting how networking behavior affects energy resource drain and gain as well as two correlative field studies to replicate findings in the field and integrate attitudinal and productive outcomes.

In Study 1, I seek to establish the energy resource drain process: That is, the postulated self-control depleting effect of networking behavior. Further, I examine boundary conditions of the energy resource drain process. More specifically, I seek to identify personality traits and skills, which serve as buffers against the depleting effect of networking behavior. Therefore, I conducted a laboratory experiment with student participants engaging in either the experimental networking or one of two cognitive control tasks.

In the second study, I take a more nuanced look at the energy resource drain process. That is, I consider a potential mechanism of the self-control depleting effect of networking behavior, namely, impression management. In addition, I establish the energy resource gain process of networking behavior, as manifested by enhanced affective states. Therefore, again, I conducted a laboratory experiment with students, engaging in either the networking or a social control task. Whereas the experimental designs used in Studies 1 and 2 provide high internal validity, replicating results with a working sample in a natural networking situation strengthens external validity.

Therefore, in Study 3, I pursue to replicate findings from the experimental studies in the field. That is, I look at both the energy resource drain (and buffering effects of personality) and energy resource gain process in real networking situations. Therefore, I conducted a study with

attendees of multiple networking events, performing a pre-test and a post-test (Shadish et al., 2002).

Further, the developed model proposes that networking behavior and energy drain and gain influence further outcomes. More specifically, networking behavior and related energy states are assumed to affect attitudinal (e.g., work-related well-being) and productive (e.g., work performance) outcomes throughout the day. Therefore, in Study 4, I extended the investigated time frame to integrate outcomes that have an impact on employees' after-work hours. In order to investigate attitudinal and productive outcomes of networking behavior, I conducted a daily diary study with employees who completed two online surveys per day (after work and before bedtime) over the course of one working week.

Study 1

In Study 1, I focus on the dark side of networking behavior. That is, I seek to establish the energy resource drain process, more specifically, the self-control depleting effect of networking behavior. Further, I examine boundary conditions of the resource drain process. In this vein, I seek to identify personality traits (i.e., extraversion) and skills (i.e., social skills) which serve as buffers against the depleting effect of networking behavior.

Therefore, I conducted a controlled laboratory experiment with 206 students, engaging in either the networking or one of two cognitive control tasks (Stroop test). I used the Stroop task as a well-established manipulation in self-control research to validate the present experimental design and provide reference values for high versus low depletion as a benchmark for depletion after networking.

Hypotheses

Figure 4 depicts an overview of the hypotheses in Study 1.

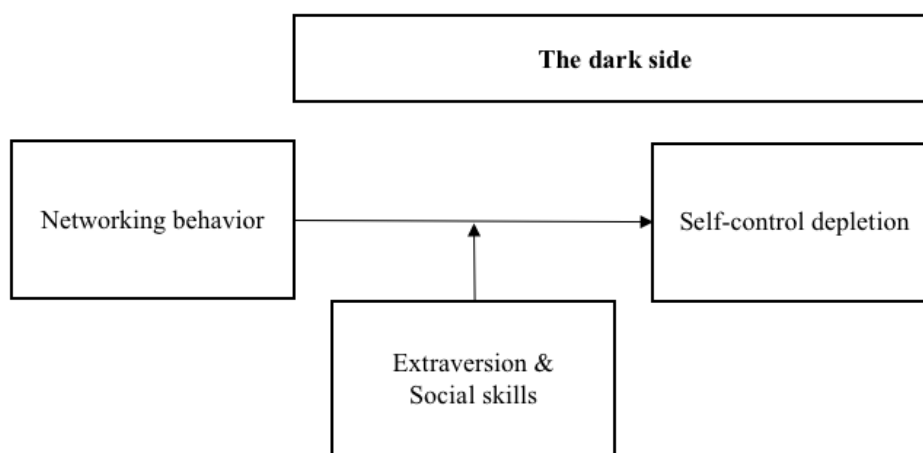


Figure 4. Overview of hypotheses in Study 1.

Energy resource drain

According to the energy resource drain process, networking behavior requires and thus depletes consumptive energy resources. This is in line with COR's resource investment principle, stating that individuals must invest resources in order to gain other resources (Hobfoll, 2001). Because self-control has been found to be such a depletable energy resource (e.g., Baumeister et al., 1998), I apply a self-regulatory lens to COR's resource investment principle. As outlined above, networking behavior encompasses several processes that consume self-regulatory resources, for example, directing one's behavior towards a goal (Wang et al., 2015) or managing one's emotions (e.g., Muraven et al., 1998) and impression (e.g., Vohs et al., 2005). Therefore, I suggest that engaging in networking behavior should result in short-term depletion of self-regulatory resources.

Hypothesis 1a: Networking behavior depletes self-control.

Furthermore, I seek to examine boundary conditions of the postulated energy resource drain process. COR emphasizes that personality can influence the process of resource loss and gain (Hobfoll, 2002; Hobfoll et al., 1990). In support of this notion, self-control research suggests that dispositional behaviors (as opposed to counter-dispositional behaviors, such as introverted behavior for extraverts, e.g., Gallagher et al., 2011; Zelenski, Santoro, & Whelan, 2012) and well-learned behaviors (as opposed to unfamiliar and infrequently used behaviors, e.g., Vohs et al., 2005) have less impairing effects on subsequent self-control success. Therefore, I seek to identify personality traits and skills (i.e., constructive resources, Hobfoll, 2001; ten Brummelhuis & Bakker, 2012), which might be able to buffer against the postulated depleting effect of networking.

First, with regard to the five-factor model of personality, studies have consistently found that extraversion is an important predictor of networking (e.g., Forret & Dougherty, 2001; Wolff

& Moser, 2006, see antecedents). Extraverts prefer and enjoy the company of others (Mount & Barrick, 1995) and do engage in a lot of social activities (e.g., Mehl, Gosling, & Pennebaker, 2006; Paunonen, 2003). While introverts often experience discomfort in social situations and thus actively try to avoid them, extraverts seek out social situations and can easily initiate contacts, also in professional contexts (Forret & Dougherty, 2001). In this vein, I argue that, for extraverts, networking behavior corresponds to their dispositional behavior, whereas for introverts, it counteracts to their dispositional behavior. Consequently, extraverts should be better able to conserve self-regulatory energy resources in networking situations.

Hypothesis 1b: Extraversion moderates the depleting effect of networking behavior.

Social skills, like extraversion, have a positive relationship with networking behavior (Hager, 2015). Whereas extraversion taps into the quantity of people's social activities, social skills refer to the quality (i.e., effectiveness) of people's social interactions (Kanning, 2009a). Social skills enable individuals to effectively read, understand, and control social interactions (Ferris, Witt, & Hochwarter, 2001). Socially skilled individuals have well learned to make a positive first impression (Baron & Markman, 2000) and to establish rapport with others (Goleman, 1998). Furthermore, they are able to adjust their "behavior to different and changing situational demands and to effectively influence and control the responses of others" (Witt & Ferris, 2003, p. 811). Hence, they feel comfortable in a wide range of social situations (Baron & Markman, 2000). I suggest that socially skilled people (as opposed to people with low social skills) can draw on their social skills in networking interactions. In this vein, like extraversion, social skills might serve as a protective factor that helps mitigating depletion following networking.

Hypothesis 1c: Social skills moderate the depleting effect of networking behavior.

Method

Participants

The experiment took place at a laboratory at University of Cologne (UoC). I approached students via various UoC mailing lists and UoC-related Facebook groups. Overall, 206 students participated for monetary compensation (8 €) or course credit. The sample consisted of 149 (72%) female and 57 (28%) male subjects (cf. Table 5). The average age was 24.81 years ($SD = 4.47$). Participants came from a variety of fields of study; most frequent were psychology (25%), geography (9%), and pedagogics (7%).

Procedure

One week before showing up at the laboratory, all participants filled in an online background survey and chose a date for the experiment on site.¹⁴ Upon arrival at the laboratory, all participants read and agreed to an informed consent. Those in the networking condition arrived in groups of eight and were instructed to simulate a networking event with assigned roles for 20 minutes.¹⁵ Participants in the control conditions arrived in groups of up to five persons and were seated in separate cubicles where they completed a PC-based Stroop task for 20 minutes.¹⁶ After engaging in the respective task (Networking or Stroop), all subjects were seated or stayed in

¹⁴ Due to the different group sizes in the conditions, I had to assign dates for the respective conditions beforehand. When choosing a date, participants had no idea which condition they registered for and I made sure they did not enroll together with acquaintances. The experiment took place from Monday till Friday between 12 am and 2.30 pm. I made sure that days of the week and times of day randomly varied among the conditions.

¹⁵ The time frame of 20 minutes was based on a study using a 20-minutes group discussion to test the effects of extraverted behavior on extraverts and introverts (Zelenski et al., 2012).

¹⁶ The laboratory was equipped with only five PCs able to run the Software required for the Stroop tests.

separate cubicles to undertake an ostensible product test for five minutes, tasting and rating candy as a measure of self-control depletion. Afterwards, participants self-rated their self-control and filled out a brief post-questionnaire. Then all participants were thanked and paid. After data collection was over, they were debriefed via email.

Measures

Experimental manipulation

Experimental condition

The networking (NW) manipulation was derived from a networking training task (de Janasz & Forret, 2008), incorporating several behaviors relevant in networking situations (e.g., greeting one another with a handshake, articulating an elevator pitch, exchanging relevant resources with others). These behaviors are also covered by items in networking scales (e.g., “At company events or outings, I approach colleagues I haven’t met before“, “If I want to meet a person who could be of professional importance to me, I take the initiative and introduce myself”, and “At informal occasions, I exchange professional tips and hints with colleagues from other departments”, Wolff et al., 2011).

Participants ($N = 103$)¹⁷ received written instructions (Appendix A) to simulate a networking event with assigned roles. Role descriptions (see Table 4) specified their profession (e.g., doctor, lawyer, etc.), two resources they were in need of (e.g., finding a job or a business

¹⁷ Because I had no comparable effect size that I could draw on for estimating the postulated effect, I used a relatively large sample of NW participants to ensure adequate power. Using a post-hoc power analysis in G*power (Faul, Erdfelder, Buchner, & Lang, 2009; $d = 0.62$, $\alpha = 0.05$, one-tailed), I determined a power of 98% for the difference between NW and LD Stroop participants regarding self-control depletion (candy consumption).

partner etc.), and two resources they had to offer (e.g., the lawyer had judicial expertise and navigation knowledge). As can be seen in the role descriptions, doctor and lawyer could help each other reciprocally, but both needed to find another interaction partner to receive the second resource needed. Furthermore, if they met people who did not provide relevant resources or requested the resources offered, they could try to help by directing them to others who might be able to help („If I can’t help a colleague from another department directly, I will keep an eye out for him/her”, Wolff et al., 2011). The explicit task objective was to find the two unknown target persons who had the resources needed and at the same time to make a reputable and favorable impression. Participants were informed that the one person who successfully found both target persons and was nominated by most of the seven interaction partners as the “best networker” would receive a bonus of 10€ upon completion of the experiment. Thus, networking “successfully” during the experimental situation was more relevant for participants. Also, the extrinsic reward is in line with typical “networking events highlight[ing] extrinsic rather than intrinsic motivations of participants, emphasizing the end goal” (Bergemann et al., 2017, p. 8). After reading the instructions and preparing their roles for three minutes, participants started with the networking group task.

Table 4

Sample Roles in the Networking Condition

Doctor.

You are a successful surgeon, but currently you fear that a patient may sue you for medical malpractice. This has never happened to you before and you may need an experienced lawyer. Furthermore, you are an engaged *SPD* party member.

Lawyer.

You are an experienced lawyer pleading many influential and prosperous clients. You love sailing and toy with the idea of buying a boat. You may need advice from an expert. By the way, you do have an ingrown toenail, which most likely needs surgery, but you are a little embarrassed talking about it.

Control conditions

Two control groups ($N_{\text{total}} = 103$)¹⁸ engaged in a modified version of the original Stroop task (Stroop, 1935). In psychological testing, the Stroop test is widely used to assess an individuals' selective attention, cognitive flexibility and processing speed as well as executive functions (e.g., Golden, 1978; MacLeod, 1991). Also, the Stroop task is a well-established paradigm in ego depletion research and meta-analytical research has confirmed that the Stroop task is a valid self-control manipulation ($d = 0.40$, Hagger et al., 2010). I used the control groups for two reasons: First, I sought to validate the present experimental design by replicating findings from prior ego depletion research. Second, I needed reference values for high versus low depletion

¹⁸ Using an a priori power analysis in G*power (Faul et al., 2009; $d = 0.72$, power: 95%, one-tailed), I computed an intended sample size of 43 subjects per Stroop condition. The effect size was based on a study by Imhoff et al. (2013), using the modified Stroop tasks to manipulate depletion and candy consumption as dependent measure of self-control depletion.

in order to benchmark the level of depletion after networking. This is in line with self-control research using experimental designs in which control participants engage in a task other than that administered to the experimental depletion group (e.g., Burkley, 2008, Study 3; Muraven et al., 1998, Study 3).

On a personal computer, using the software “Inquisit Lab”, participants were shown color words written in colored fonts.¹⁹ They were instructed to indicate the color font of the presented word by pressing the corresponding colored key as fast as they could without making many errors (Appendix B). Stimuli were presented until participants responded; if they had not responded after 200 ms, they were requested to react faster (see Figure 5). In the low depletion condition ($N = 52$), all color names were presented in the corresponding color font (e.g., ‘red’ appeared in red font). In the high depletion condition ($N = 51$), the meaning of the word never matched the color font, so that the automatic response to press the key corresponding to the meaning of the word had to be inhibited (see Figure 5). In addition, participants were asked to press the key corresponding to the meaning of the word if the word was presented in blue font (25% of the trials), thus preventing them from strategically ignoring the meaning of the words. Participants were informed that the program recorded their accuracy and reaction time and that, out of eight participants, the person with the lowest error rate would receive a bonus of 10 €. In both conditions, participants had to complete four practice trials correctly before starting the Stroop task.

¹⁹ On average, during the 20-minutes period, participants in the LD Stroop condition were presented 463.27 stimuli ($SD = 22.20$) and in the HD Stroop condition, participants averaged out at 422.22 presented stimuli ($SD = 23.75$).

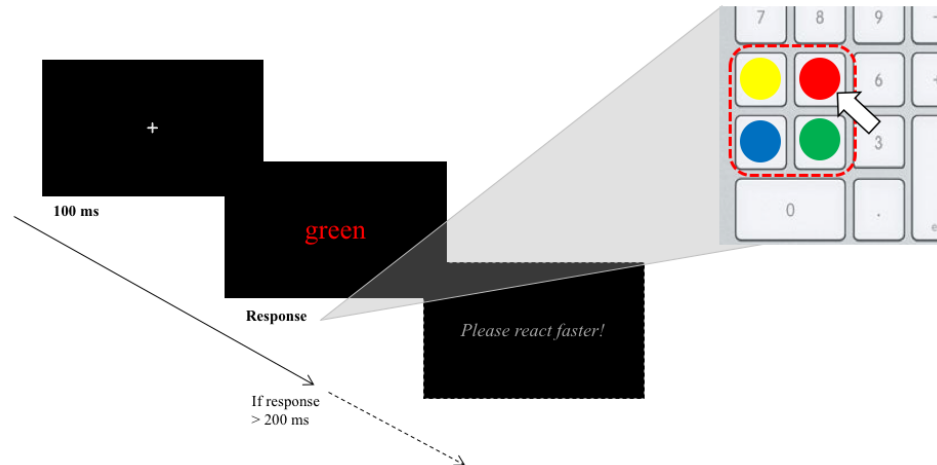


Figure 5. Sample sequence of the Stroop task (HD Stroop condition).

Screening for univariate outliers regarding Stroop performance, I identified each one participant in both Stroop conditions with an error rate that was more than three standard deviations above the overall mean.²⁰ All analyses reported were conducted both with and without those two Stroop outliers. However, because results did not substantively differ, the analyses reported below are based on the full sample. In general, this procedure is more conservative, because standard deviations are higher and it is therefore more difficult to reach significance.

Dependent variables

Self-control depletion (candy consumption)

Food taste tests are „frequently used dependent tasks“ (Hagger et al., 2010, p. 513) in self-control research. The consumption of unhealthy, high-calorie food (e.g., candy) serves as a prime example of impulsive behavior and thus a failure of self-control to resist temptation. Based on previous findings that people are particularly likely to grab snacks when self-control is depleted

²⁰ LD Stroop error rate: $M = 2.31\%$, $SD = 1.85$; HD Stroop error rate: $M = 21.06\%$, $SD = 9.65$.

(e.g., Hofmann, Rauch, & Gawronski, 2007; Imhoff, Schmidt, & Gerstenberg, 2014; meta-analysis: $d = 0.50$, Hagger et al., 2010), I used candy consumption as a measure of depletion. A bowl containing 124 grams of chocolate coated peanuts (similar to M&M's) was placed in front of each participant. Participants were instructed to taste the product and rate it on a variety of dimensions such as naturalness or sweetness. During the tasting process, participants listened to “neutral” music (e.g., Beethoven's Violin Concerto; see Mitterschiffthaler, Fu, Dalton, Andrew, & Williams, 2007) to drown out chewing noises. After five minutes, the candy was taken out of participants' reach. Candy consumption was later determined by subtracting the amount left of the pre-consumption weight. More candy consumption indicated higher levels of depletion of self-control.

Two participants in the networking and one participant in the LD Stroop condition reported to be allergic or vegan and therefore had to be excluded from all analyses on candy consumption. Two participants in the Stroop conditions did not eat any candy without reporting a reason. Screening for univariate outliers ($SD > 3$) regarding candy consumption, I identified four participants in the networking condition who were more than three standard deviations above the overall mean ($M = 22.34$, $SD = 20.07$, see Table 6). All analyses reported in the subsequent discussions were conducted both with and without the six outliers regarding candy consumption ($.00$ or > 82.55). However, because results did not substantively differ, I report results based on the full sample.

Self-Control (self-rated)

I used the brief State Self-Control Capacity Scale (SSCCS; Ciarocco, Twenge, Muraven, & Tice, 2004; German version: Bertrams et al., 2011) to assess participants' subjective self-control

(Appendix C). Bertrams et al. (2011) found the scale to be one-dimensional and reliable ($.85 < \alpha < .91$). Furthermore, the scale showed the expected relations with behavioral measures of self-control (e.g., Stroop test), thus supporting its validity. I used nine items from the original ten-item scale; The item „If I were tempted by something right now, it would be very difficult to resist” was removed because participants might connect it to their previous candy consumption and in previous validation studies this item consistently showed the lowest discriminative power (Bertrams et al., 2011). Sample items of the SSCCS include “I feel drained,” (reversed) “I feel like my willpower is gone” (reversed), and “I would want to quit any difficult task I was given” (reversed). Participants reported their self-control on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), $\alpha = .88$.

Moderating variables

Extraversion

In the general online survey prior to the experiment on site, I measured extraversion with twelve items derived from the NEO-FFI (Costa & McCrae, 1995; German version: Borkenau & Ostendorf, 2008; Appendix D). The NEO-FFI is one of the most widely used self-report instruments to assess the Five-Factor Model and multiple studies provide evidence for its validity (e.g., Costa & McCrae, 1995; Kanning, 2009b). Sample items are “I like to have a lot of people around me”, “I really enjoy talking to people”, and “I usually prefer to do things alone” (reversed). Participants used a five-point Likert response format (1 = *strongly disagree* to 5 = *strongly agree*) to rate their level of extraversion, $\alpha = .82$.

Social Skills

In the general online survey, I measured social skills with a seven-item scale (Ferris et al., 2001; Appendix E). Ferris et al. (2001) and Witt and Ferris (2003) report good reliabilities of the scale (Cronbach's Alphas: .79 - .89). Sample items are "In social situations, it is always clear to me exactly what to say and do", "I am able to adjust my behavior and become the type of person dictated by any situation.", and "I am particularly good at sensing the motivations and hidden agendas of others". Participants used a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), $\alpha = .73$.

Control variables

Regarding the use of control variables, scholars have identified several problems in existing research, including a) „automatic or blind inclusion of control variables“ (Spector & Brannick, 2011, p. 287), b) “unclear descriptions of measures and methods, [and c)] incomplete reporting” (Becker, 2005, p. 274). Following the author's (Becker, 2005; Spector & Brannick, 2011) recommendations, a) I use rational explanations based on theory and empirical results to drive the inclusion of controls in the four studies. Furthermore, b) I describe how each control was measured and how it was included in the statistical analysis and c) I report standard descriptive statistics, reliabilities, and correlations as well as betas and significance levels of the included controls. Following Becker (2005), I have run all analyses both with and without the assessed control variables. If results did not differ with or without controlling for a certain control variable, I report the final analyses without this variable.

In all analyses on behavioral self-control depletion, I included several control variables that might affect candy consumption and have been included as controls in prior studies using candy consumption as dependent measure (e.g., Hofmann et al., 2009; Imhoff et al., 2014).

Liking of the product

Liking of the product was assessed with the single-item measure (“How much do you like the product?”), which was embedded in a set of questions administered during the product test.

Hunger

In the post-test, participants were asked if they had been hungry before they entered the experiment.

Body Mass Index

In the online survey, participants indicated their height and weight so that I could calculate their BMI. However, because results did not substantively differ with or without including BMI as a control variable, I report results without controlling for BMI.

Demographics

Furthermore, I assessed participants’ gender, age and field of study in the online survey. However, because results did not substantively differ with or without controlling for demographic variables, I report results without controlling for those variables.

Results

Table 5 displays the descriptive statistics, reliabilities, and correlations of all study variables. Allocation of participants to the experimental conditions was independent of age, $F(1, 204) = 0.45, p = .503$. Also, gender distribution did not differ between the three conditions, $\chi^2 = .043, p = .337$, and participants in the three conditions did not differ regarding social skills, $F(1, 204) = 1.15, p = .285$. In contrast, mean levels of extraversion significantly differed between the groups, $F(1, 204) = 4.84, p = .029$. Participants in the LD Stroop condition ($M = 3.18, SD = 0.61$), reported marginally lower extraversion than HD Stroop participants ($M = 3.40, SD = 0.54$), $t(101) = 1.94, p = .056$, and significantly lower extraversion than networking participants, ($M = 3.40, SD = 0.52$), $t(153) = 2.35, p = .02$. However, in the present context, it seems not problematic that participants in the NW condition were slightly above the overall mean regarding their extraversion. Assuming that extraversion buffers against depleting effects in the NW condition, comparing the depletion group means is rather conservative when NW participants are more extraverted. Also, controlling for extraversion did not substantively change the effects (see Table 8).

Importantly, the three experimental conditions did not significantly differ with regard to BMI, $F(1, 201) = 0.19, p = .892$, reported hunger, $F(1, 201) = 1.26, p = .263$, and liking of the product, $F(1, 200) = 0.87, p = .353$.

Contrasting expectations, depletion of self-control (candy consumption) and self-control (self-rated) did not show a significant (negative) correlation, neither for the whole sample, $r = .03, p = .728$ (see Table 5), nor when examining the conditions separately, networking: $r = -.13, p = .19$, HD Stroop: $r = .07, p = .608$, LD Stroop: $r = .05, p = .732$.

Table 5

Descriptive Statistics, Reliabilities, and Correlations between Study Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1. Networking ^a	0.50	0.50											
2. HD Stroop ^a	0.25	0.43											
3. LD Stroop ^a	0.25	0.44											
4. Gender ^b	0.28	0.45	-.12 [†]	.17 ^{**}	.04								
5. Age	24.81	4.40	-.09	.11	-.01	.21 ^{**}							
6. Extraversion	3.35	0.56	.10	.06	-.17 ^{**}	.03	-.07	(.82)					
7. Social skills	3.51	0.49	.00	.14 [*]	-.14 [*]	.04	.03	.39 ^{***}	(.73)				
8. Hunger ^c	0.34	0.47	-.10	.09	.03	.04	.05	.01	.02				
9. Product liking	5.36	1.24	-.08	.07	.03	.07	-.05	.23 ^{***}	.23 ^{***}	.20 ^{**}			
10. Self-control ^d	5.39	1.01	.31 ^{***}	-.05	.31 ^{***}	-.08	-.03	.39 ^{***}	.12 [†]	-.17 [*]	-.00	(.88)	
11. Self-control depletion ^e	22.34	20.07	.20 ^{**}	-.02	-.22 ^{**}	.31 ^{***}	.08	.09	-.06	.23 ^{***}	.23 ^{***}	.03	

Note. $N = 206$. Cronbach's alphas are listed on the diagonal.

^aReference groups: remaining conditions. ^bGender (0 = female, 1 = male). ^cHunger (0 = no, 1 = yes). ^dSelf-control (self-rated). ^eSelf-control depletion (candy consumption in grams).

[†] $p \leq .10$. ^{*} $p \leq .05$. ^{**} $p \leq .01$. ^{***} $p < .001$.

Table 6 displays results for the experimental and control groups regarding the dependent self-control measures. To examine the substantive hypotheses, I conducted hierarchical regression analyses. As recommended by Cho and Abe (2013), all hypotheses were tested in a one-tailed way. I report results separately for the two dependent measures of self-control.

Table 6

Descriptive Statistics for Dependent Measures

Variable	Condition	<i>N</i>	<i>M</i>	<i>SD</i>
Self-Control depletion ^a	NW	101	26.38	23.00
	Stroop HD	51	21.76	19.26
	Stroop LD	51	14.90	10.49
Self-control ^b	NW	103	5.70	0.87
	Stroop HD	51	5.31	0.92
	Stroop LD	52	4.86	1.13

Note. ^aSelf-Control depletion (candy consumption in grams).

^bSelf-control (self-rated).

Energy resource drain

Self-control depletion (candy consumption)

Hypothesis 1a predicted that networking behavior would deplete self-control resources. In Step 1, I added the control variables hunger and liking of the product. Both control variables were positively correlated with candy consumption (see Table 5), and had significant main effects on candy consumption (see Table 7). In Step 2, I added the dummy-coded conditions of NW and HD Stroop (with LD Stroop serving as reference category). Adding the conditions in Step 2

significantly increased the amount of variance explained, $\Delta R^2 = .07, p < .001$. Testing HD Stroop (vs. LD Stroop) was to test the validity of the Stroop paradigm, as participants in the HD Stroop condition should consume more candy than participants in the LD Stroop condition. The regression coefficient of HD Stroop was positive and significant, $\beta = .14, p = .044$, indicating that, as expected, HD Stroop participants were more depleted than LD Stroop participants. As can be seen in Table 7 and in line with expectations, the regression coefficient of networking was positive and significant as well, $\beta = .32, p < .001$, thus confirming that participants in the networking condition were more depleted than participants in the LD Stroop²¹ condition (see Figure 6).²² Thus, Hypothesis 1a received support.

²¹ I also tested if NW and HD Stroop participants differed regarding self-control depletion. The regression coefficient of NW (with HD Stroop serving as reference category) was positive and marginally significant, $\beta = .16, p = .054$. Thus, NW participants were marginally more depleted than HD Stroop participants.

²² One-tailed tests.

Table 7

Regression of Self-control Depletion on Condition

Steps		Unstandardized		Standardized	R^2	ΔR^2
		Coefficients		Coefficients		
		b	SE	β		
1	-	-	-	-	.09***	
	Hunger ^a	8.03	2.96	.19**	-	-
	Product liking	3.19	1.13	.20**	-	-
2	-	-	-	-	.16***	.07***
	Hunger	8.64	2.87	.20**	-	-
	Product liking	3.43	1.09	.21**	-	-
	Networking	12.84	3.24	.32***	-	-
	HD Stroop	6.43	3.75	.14*	-	-

Note. $N = 203$. Dependent variable: Candy consumption in grams.

^aHunger (0 = no, 1 = yes).

** $p < .01$. *** $p < .001$.

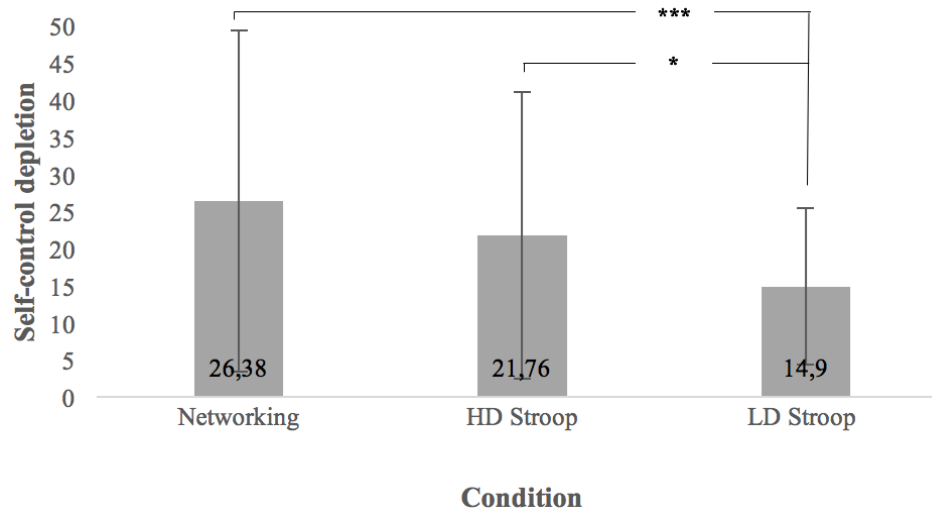


Figure 6. Differences between conditions in self-control depletion.

Self-control depletion: Candy consumption in grams.

* $p \leq .05$. *** $p < .001$.

Hypothesis 1b predicted a buffering effect of extraversion for the networking group; in contrast, in the Stroop conditions, extraversion should not affect depletion of self-control through networking. To test this hypothesis, I constituted a new dummy-coded variable (networking vs. LD/HD Stroop combined). I used Model 2 (see Table 8), which included the main effects of networking (vs. HD and LD Stroop combined)²³ and extraversion as a baseline. Notably, the main effect of networking on self-control depletion persisted to be significant after adding extraversion. In the next step, I added the cross-product of Networking \times Extraversion. Results showed that the interaction term reached significance, $\beta = -.24$, $p = .004$, and significantly increased the amount of variance explained, $\Delta R^2 = .03$, $p = .007$.

²³ Note that the moderating effect of extraversion in the NW condition remained significant when considering LD and HD Stroop conditions separately.

Table 8

Regression of Self-Control Depletion on Condition and Extraversion

Steps		Unstandardized		Standardized	R^2	ΔR^2
		Coefficients		Coefficients		
		b	SE	β		
1	-	-	-	-	.09***	
	Hunger ^a	8.03	2.96	.19**	-	-
	Product liking	3.19	1.13	.20**	-	-
2	-	-	-	-	.15***	.06**
	Hunger	8.91	2.89	.21**	-	-
	Product liking	3.41	1.13	.21**	-	-
	Networking ^b	9.64	2.73	.24***	-	-
	Extraversion	0.25	1.41	.01	-	-
3	-	-	-	-	.18***	.03**
	Hunger	9.93	2.87	.23***	-	-
	Product liking	3.50	1.12	.22**	-	-
	Networking	9.87	2.69	.25***	-	-
	Extraversion	3.44	1.82	.17 [†]	-	-
	Networking \times Extraversion	-7.49	2.75	-.24**	-	-

Note. $N = 203$. Dependent variable: Candy consumption in grams.

^aHunger (0 = no, 1 = yes). ^bNetworking (0 = HD & LD Stroop, 1 = NW).

[†] $p \leq .10$. ** $p < .01$. *** $p < .001$.

Simple slope analyses (Hayes & Matthes, 2009) revealed that, in the networking group, participants with a low score in extraversion ($M - 1 SD$) were significantly more depleted than participants with a high score in extraversion ($M + 1 SD$), $b = -10.43$, $se = 3.43$, 95% CI [-17.20, -3.66], $t = -3.04$, $p = .002$ (one-tailed, see Figure 7). In contrast, in the Stroop conditions, participants with a low score in extraversion ($M - 1 SD$) were significantly less depleted than

participants with a high score in extraversion ($M + 1 SD$), $b = 6.05$, $se = 2.91$, 95% CI [0.30, 11.80], $t = 2.08$, $p = .020$ (one-tailed). Thus, results confirmed Hypothesis 1b.

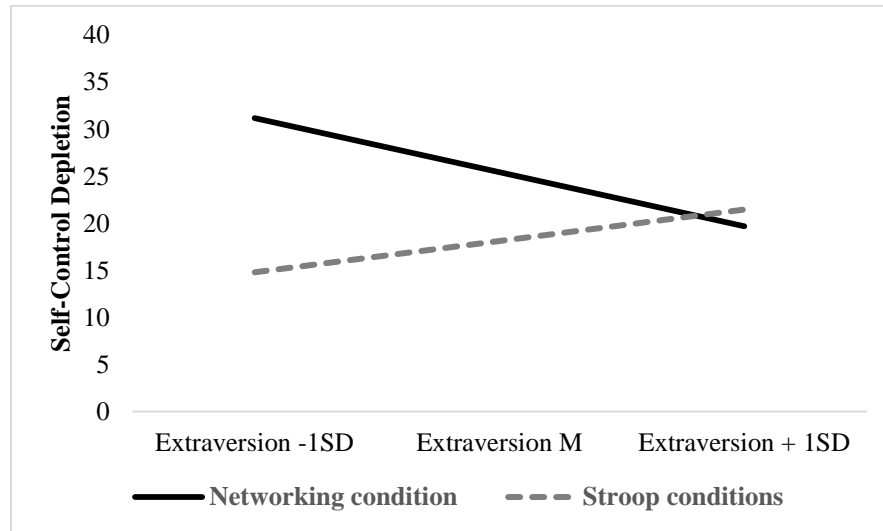


Figure 7. Simple slopes for the interaction between condition and extraversion on self-control depletion.
Self-Control depletion: Candy consumption in grams.

I employed the same procedure to test Hypothesis 1c, suggesting that social skills buffer against the depleting effect of networking. Again, I used a dummy-coded variable for condition (networking vs. LD/HD Stroop combined).²⁴ In support of Hypothesis 1b, I found a significant increase in the amount of variance explained after adding the cross-product of social skills and networking in Step 3, $\Delta R^2 = .03$, $p = .007$. In addition, the interaction term was significant, $\beta = -.24$, $p = .004$ (see Table 9).

²⁴ Note that the moderating effect of social skills in the NW condition remained significant when considering LD and HD Stroop conditions separately.

Table 9

Regression of Self-Control Depletion on Condition and Social Skills

Steps		Unstandardized		Standardized	R^2	ΔR^2
		Coefficients		Coefficients		
		b	SE	β		
1	-	-	-	-	.09***	
	Hunger ^b	8.03	2.96	.19**	-	-
	Product liking	3.19	1.13	.20**	-	-
2	-	-	-	-	.16***	.07***
	Hunger	8.68	2.87	.21**	-	-
	Product liking	3.94	1.12	.24***	-	-
	Networking	9.87	2.68	.25***	-	-
	Social skills	-2.45	1.40	-.12 [†]	-	-
3	-	-	-	-	.19***	.03**
	Hunger	8.55	2.82	.20**	-	-
	Product liking	4.13	1.11	.26***	-	-
	Networking	10.17	2.64	.25***	-	-
	Social skills	0.71	1.79	.04	-	-
	Networking \times Social Skills	-7.37	2.69	-.24**	-	-

Notes. $N = 203$. Dependent variable: Candy consumption in grams.

^aHunger (0 = no, 1 = yes). ^bNetworking (0 = HD & LD Stroop, 1 = NW).

[†] $p \leq .10$. ** $p < .01$. *** $p < .001$.

As can be seen in Figure 8, participants in the networking group, participants with a low score in extraversion ($M - 1 SD$) were significantly more depleted than participants with a high score in extraversion ($M + 1 SD$), $b = -13.68$, $se = 4.24$, 95% CI [-22.04, -5.33], $t = -3.23$, $p \leq .001$ (one-tailed, see Figure 8). In contrast, in the Stroop conditions, participants with a low score in social skills ($M - 1 SD$) did not significantly differ from participants with a high score in social

skills ($M + 1 SD$), $b = 1.46$, $se = 3.69$, 95% CI $[-5.81, 8.73]$, $t = 0.40$, $p = .351$ (one-tailed). Thus, I found support for Hypothesis 1c.

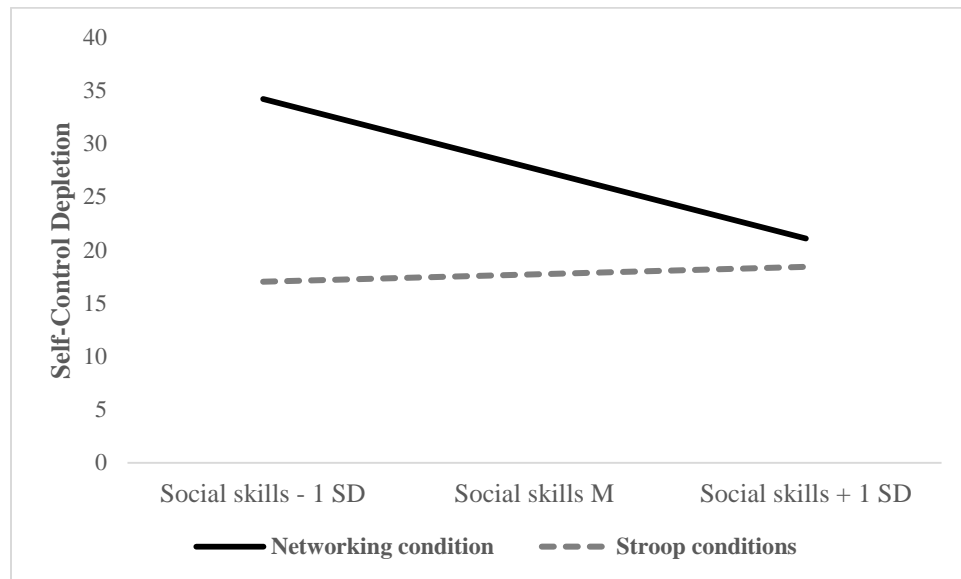


Figure 8. Simple slopes for the interaction between condition and social skills on self-control depletion.

Self-control depletion: Candy consumption in grams.

Self-Control (self-rated)

Hypothesis 1a predicted that networking behavior would deplete self-control. The regression of self-control on condition resulted in a significant outcome, $F(2,203) = 13.91$, $p < .001$. However, as shown in Table 10, the regression coefficient of networking was positive and significant, $\beta = .42$, $p < .001$, showing that, contrasting the hypothesis, participants in the networking condition reported higher levels of self-control than participants in the LD Stroop condition. Likewise, the regression coefficient of HD Stroop was positive and significant, $\beta = .19$, $p = .009$, showing that, also contrasting predictions, participants in the HD Stroop condition reported higher levels of self-control than participants in the LD Stroop condition. Thus, in contrast

to the hypothesis that networking behavior depletes self-control, I found exactly the opposite effect: Participants self-reported the highest levels of self-control after networking and the lowest levels of self-control after the LD Stroop task. Thus, with regard to the self-report measure of self-control, results did not support Hypothesis 1a.

Table 10

Regression of Self-Rated Self-Control on Condition

	Unstandardized		Standardized	R^2
	Coefficients		Coefficients	
	b	SE	β	
-	-	-	-	.12***
Networking	0.85	0.16	.42***	-
HD Stroop	0.45	0.19	.19**	-

Note. $N = 206$. Dependent variable: State Self-Control Capacity Scale.

* $p < .05$. *** $p < .001$.

Hypothesis 1b predicted a buffering effect of extraversion for the relationship between networking and self-control. In the first step, I included the main effects of networking and extraversion. In the next step, I entered the cross-product of Networking \times Extraversion. Adding the interaction variable did not significantly increase the amount of variance explained, $\Delta R^2 = .00$, $p = .628$, and the interaction term was not significant, $\beta = -.04$, $p = .314$ (Appendix F). Thus, regarding the self-report measure of self-control, I found no support for Hypothesis 1b.

Hypothesis 1c predicted that social skills would moderate the depleting effect of networking. Again, in Step 2, I added the cross-product of Networking \times Social Skills. Entering the interaction variable into the model did not significantly increase the amount of variance

explained, $\Delta R^2 = .00$, $p = .707$, and the interaction term was not significant, $\beta = -.05$, $p = .354$ (Appendix F). Thus, with regard to the self-report measure of self-control, I found no support for Hypothesis 1c.

Discussion

In Study 1, I focused on the dark side of networking. That is, I sought to establish the energy resource drain process, more specifically, the self-control depleting effect of networking behavior. Further, I examined boundary conditions of the energy resource drain process: That is, I identified personality traits (i.e., extraversion) and skills (i.e., social skills) which serve as buffers against the depleting effect of networking behavior. Therefore, I conducted a controlled laboratory experiment with 206 students, engaging in either the networking or one of two control tasks.

I found initial support for the hypothesis that networking has a dark side in terms of energy resource drain. That is, networking behavior depletes self-control resources (as benchmarked with two well-established cognitive control conditions). More specifically, participants in the networking condition consumed significantly more candy than participants in the low depletion Stroop condition. Also, as predicted, extraversion and social skills moderated the depleting effect of networking. That is, following networking, participants with high levels in extraversion or social skills were less depleted (consumed less candy) than participants with low levels in extraversion or social skills.

However, I found no support for the hypotheses regarding self-rated self-control: Opposing expectations, participants in the networking condition reported the highest levels of self-control, whereas LD Stroop participants reported the lowest levels of self-control. Furthermore, the two measures of self-control did not show a significant correlation (cf. Table 5). Theoretically, non-

significant correlations and different outcomes on the two measures of self-control can be due to several reasons, for example, (a) method-related characteristics, (b) motivational biases in self-reports, (c) lack of introspective access, or (d) complete independence of the underlying constructs (cf. Hofmann, Gawronski, Gschwender, Le, & Schmidt, 2005).

First, method-related factors might be rooted in the experimental procedure. After the respective depletion manipulation (NW or Stroop task), participants first engaged in the product test for five minutes. After that, they filled out the State Self-Control Capacity Scale. However, prior studies show that even short periods of rest or relaxation might help restoring self-control resources after depletion and thus minimize the deleterious effects of depletion (Baumeister & Heatherton, 1996; Muraven & Baumeister, 2000). For example, “when depleted participants received a 10-minute period between regulatory tasks, their subsequent performance equaled non-depleted participants” (Tyler & Burns, 2008; see also Oaten, Williams, Jones, & Zadro, 2008). Thus, participants might have been able to replenish their self-control resources during the product test. However, a recovery effect cannot explain the reverse findings: Following networking, participants first consumed the largest amount of candy (and LD Stroop participants ate least), whereas they then reported the highest levels of self-control (LD Stroop participants the lowest). That provokes the question if eating more candy might have had a positive effect on subsequent self-control ratings. However, conversing this idea, I found no significant main effect of candy consumption, $\beta = .03$, $p = .728$, on self-rated self-control, $F(1, 201) = 1.21$, $p = .728$. Thus, there is little evidence that the product test that was inserted in between the depletion manipulation and the self-control questionnaire allowed participants for replenishing their resources or that the amount of consumed sweets had an impact on proximate self-control ratings.

Alternatively, the effects might be traced back to characteristics of the three initial depletion manipulations (NW, HD & LD Stroop). In fact, the NW task was very different from the Stroop tasks. Generally, the more differences between control and experimental group, the more likely it is that the two groups rate the tasks fundamentally different (e.g., exciting vs. boring), which might be reflected by self-reports. Particularly with regard to the LD Stroop condition, participants might have experienced the task as very monotonous and boring. Referring to the non-depleting control tasks in self-control research, Hagger et al. (2010) state that “some of the “easier” versions of these tasks [...] are tedious and boring” (p. 500). However, I can only speculate if, for example, participants felt that the LD Stroop task was more boring than the NW task. If so, it might be that the task did not actually deplete self-control resources, but, nonetheless, affected participants’ subjective states, as reflected in their self-report of self-control. For example, after the LD Stroop task, participants might have sensed that they needed something pleasant to make them feel better or that they felt lazy (sample items from the State Self-Control Capacity Scale). Therefore, in Study 2, I use a more similar control group.

Second, concerning motivational biases, explicit self-reports might be influenced by “the tendency of respondents to provide socially desirable answers” (Fisher & Katz, 2000, p. 105, social desirability bias). For example, studies suggest that people think highly of gregarious and outgoing people (e.g., Anderson & Kilduff, 2009). That is, the ideal conceptions of both introverts and extraverts tend to be extroverted (Brown & Hendrick, 1971), summarized as Extravert Ideal (Cain, 2013). Therefore, it might be that participants refused to admit that they felt depleted after engaging in social interactions. In contrast, behavioral measures such as candy consumption might be less biased because they should be less transparent to participants and thus less susceptible.

Third, self-control depletion might not be introspectively accessible for explicit self-reports. Accordingly, Muraven (2012) suggested that depletion should not be necessarily interpreted as a conscious process because people cannot usually report on subjective changes indicative of having expended resources in self-regulation. Thus, there is only limited evidence that people are aware of their self-control states (see also Baumeister & Vohs, 2016; Clarkson, Hirt, Jia, & Alexander, 2010; Muraven & Slessareva, 2003; Schmeichel, Vohs, & Baumeister, 2003). In this vein, self-report measures might fall short.

Finally, as suggested by the zero-correlation between the two measures, the constructs assessed by behavioral and self-report measures might be completely independent. However, opposing this assumption, several studies have confirmed the validity of the State Self-Control Capacity Scale: For example, Bertrams et al. (2010, Study 4) found that participants in the LD Stroop condition reported more self-control than participants in the HD Stroop condition, which is in line with theory and accords with empirical findings from other Stroop studies using other self-control measures (e.g., handgrip, Goto & Kusumi, 2014).

Based on the above discussion, I attach more importance to behavioral measures of self-control (relative to self-report measures) because they seem less prone to motivational biases and do not necessarily require introspective access (cf. Hofmann et al., 2005).

In general, controlled experimental settings allow for strong causal inferences (Shadish et al., 2002). In the context of the experimental setting of Study 1, I was able to manipulate networking behavior by instructing a group of eight participants to network. Manipulating networking behavior has an advantage over measuring a person's habitual networking behavior, as "studying manipulable agents allows a higher quality source of counterfactual inference through such methods as random assignment" (Shadish et al., 2002, p. 8). Prior studies usually measured a

person's typical networking behavior (either generally, e.g., "How often do you engage in professional networking?" (Casciaro et al., 2014), or a mean score based on the frequency of showing specific behaviors within a specified period, e.g., "Within the last year, how often have you participated in social gatherings with people from work?" (Forret & Dougherty, 2001), cf. Measuring networking behavior). However, this falls short because all employees, whether or not they are practiced networkers, might engage in networking behavior eventually (e.g., at an obligatory company event) and experience its consequences. In Study 1, I was able to examine how networking affects people, irrespective of their typical behavior. In this vein, I go beyond the dichotomous classification of people as "networkers" or "non-networkers". Instead of testing simple correlations of networking behavior with certain personality factors (that are typically considered as determinants), I could test moderating effects of personality that might help explain why certain people (e.g., introverts) typically shy away from networking.

I acknowledge that, despite the strengths of the experimental design, this study is not without limitations. First, I used a post-test only design to measure depletion. This involves the risk that the effects might be due to systematic pre-differences between the groups. However, as described in the results section, other than extraversion²⁵, none of the assessed variables significantly differed between conditions. Furthermore, Shadish et al. (2002) state that the use of a predicted interaction helps improving the post-test only design: "Sometimes substantive theory is good enough to generate a highly differentiated causal hypothesis, that, if corroborated would rule out many internal validity threats because they are not capable of generating such complex empirical implications" (p. 124).

²⁵ As outlined above, with participants in the NW condition being slightly above the overall mean in extraversion, hypothesis tests were rather conservative. Also, controlling for extraversion did not affect the main effect of networking on depletion (see Table 8).

A second limitation might be the use of cognitive tasks as control conditions. Thus, an alternative explanation for the findings regarding candy consumption might be that every social interaction is per se depleting. To rule out such alternative explanations, it is suggested to select a control group, which is as similar as possible to the treatment group (D'Agostino & Kwan, 1995). Therefore, Study 2 replicates results with a control group engaging in a social task that is more similar to the networking task.

Third, due to the controlled experimental setting, the study might also involve a weakness regarding the extent to which these causal relationships generalize (Shadish et al., 2002). That is, I used students engaging in simulated role-plays. Even though I am confident that the simulated networking situation is highly representative for real networking situations, findings should be replicated with a working sample in a real networking situation. Therefore, Study 3 replicates results in the field.

Study 2

In Study 1, I focused on the dark side of networking behavior to establish the energy resource drain process. That is, I found networking to deplete self-regulatory energy resources, as benchmarked with two well-established cognitive control tasks. Furthermore, I examined boundary conditions of the resource drain process: Extraversion and social skills served as buffers against the self-control depleting effect of networking behavior.

In Study 2, I seek to shed light on both the dark and bright side of networking behavior. On the dark side, I replicate findings from Study 1 with a social control condition that is more similar to the networking condition than the control conditions used in Study 1. Additionally, I examine a potential mechanism of the depleting effect of networking, namely impression management. On the bright side, I investigate whether networking behavior generates energy resources, as manifested by improved affect.

Therefore, I conducted a controlled laboratory experiment with 128 students, performing either the networking or a control task. The control group engaged in a social task that was very similar to the networking task, but did not challenge participants to reach for a specific goal during the social interaction.

Hypotheses

Figure 9 depicts an overview of the hypotheses in Study 2.

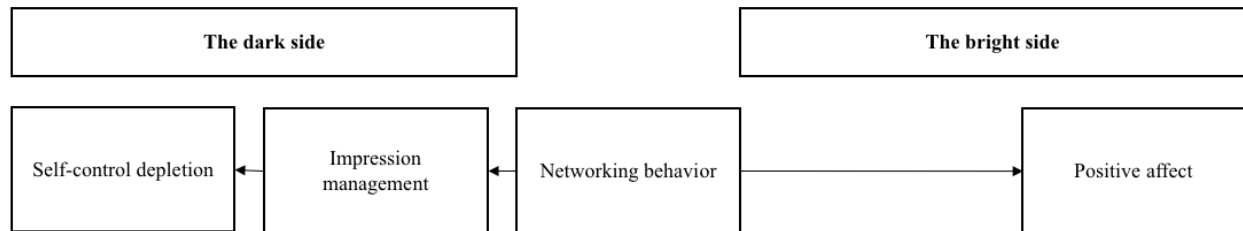


Figure 9. Overview of hypotheses in Study 2.

Energy resource drain

According to the energy resource drain process, networking behavior depletes consumptive energy resources. Supporting the proposed energy resource drain process, findings from Study 1 show that networking depletes self-control resources, as manifested by eating more candy.²⁶ However, because the control groups engaged in non-social tasks, I cannot completely rule out that it is not social interactions per se that exhausts self-control resources. Admittedly, Finkel et al. (2006) suggest that most social interactions are “simple, [...] because humans acquire [...] remarkable behavioral repertoires for bringing about social interaction. Furthermore, once these repertoires are developed, humans generally apply them effortlessly and non-consciously” (p. 457). Yet, there are specific interpersonal situations (e.g., a job interview) that require more effort

²⁶ With regard to self-rated self-control, as discussed, the surprising findings from Study 1 might be due to aspects of the depletion manipulations. Using a social control task that is very similar to the NW task makes it less likely that the two groups perceive the tasks fundamentally different (e.g., boring vs. exciting), which might then be reflected by self-reports of self-control. Therefore, despite contrasting findings in Study 1, I expect networking interactions to be perceived as more depleting than regular social interaction, which should be manifested by self-reports of self-control.

and thus exhaust an individuals' self-regulatory resources (cf. Vohs et al., 2005). For example, Trougakos et al. (2014) argue that, generally, "socializing in a workplace context is fundamentally different" (p. 408) and much more constrained than socializing outside of work (see also Sonnentag, 2001). This should also apply to networking behavior as networking is focused on relationships in professional contexts. Networking is a form of goal-directed behavior (Gibson et al., 204). Therefore, people must select adequate strategies (e.g., impression management) to achieve their interpersonal goals. Further, during the interaction, they must implement, monitor, and, if necessary, adapt those strategies. In general, goal-directed behavior requires self-control (e.g., Hofmann et al., 2009; Sun & Frese, 2013; Wang, et al., 2015). Hence, I propose that networking behavior should require more self-control than other forms of social interaction.

Hypothesis 1a: Networking behavior depletes self-control.

Contrasting networking with other forms of social behavior might also help explaining the underlying mechanisms of the depleting effect of networking behavior. Impression management, sometimes referred to as self-presentation, is defined as the "process by which individuals control the impressions others form of them" (Leary & Kowalski, 1990, p. 44). Impression management plays a central role in social interactions and individuals are particularly likely to present an advantageous self-image in professional situations (as compared to friendship situations, Le Barbenchon et al., 2016). As such, impression management has been recognized as a crucial aspect of career success (e.g., Feldman & Klich, 1991; Judge & Bretz, 1994; Judge, Cable, Boudreau, & Bretz, 1995). Networking situations most likely evoke impression management to create a desired image to the interaction partner and ultimately reach one's interpersonal ends. In contrast, in "normal" social interactions individuals should exert less impression management (cf. Le Barbenchon et al., 2016). Selecting the image one wants to present and choosing the strategic

behaviors by which one seeks to get one's message across requires volition and self-regulation (cf. Leary & Kowalski, 1990). Studies show that more effortful forms of self-presentation drain more self-regulatory resources compared with presenting oneself naturally or engaging in only minimal self-presentation (Karremans et al., 2009; Vohs et al., 2005). I conclude that networking behavior should be associated with higher levels of impression management (when compared with "normal" social interaction), which, in turn, should be linked to subsequent self-control impairment.

Hypothesis 1b: Impression management behavior mediates the depleting effect of networking behavior.

Energy resource gain

According to the energy resource gain process, networking behavior enhances affective energy resources. When strategically investing resources in networking, people must believe that these investments pay off (Hobfoll, 2001). Accordingly, Ingram and Morris (2007) argue that for individuals participating in a networking event (mixer), "the tacit assumption is that these investments pay off in terms of encounters that take place in the context of the mixer" (p. 558). Networking behavior is focused on building, maintaining, and using networking relationships (Gibson et al., 2014). In line with COR's resource definitions, networking relationships represent a resource themselves (cf. Halbesleben et al., 2014; Hobfoll, 2002; ten Brummelhuis & Bakker, 2012). Additionally, using these relationships might provide further resources (e.g., strategic information). In this vein, building a new relationship or utilizing a relationship means that a person gains a resource (cf. Hobfoll, 2001). Gain of resources such as instrumental relationships or strategic information should also be reflected by enhanced affective energy resource states (cf.

Halbesleben et al., 2014; ten Brummelhuis & Bakker, 2012). In this vein, I argue that networking behavior as a strategic resource investment behavior should improve positive affect.

Hypothesis 2: Networking behavior increases positive affect.

Method

Participants

The experiment took place at the same laboratory at University of Cologne as the first experiment. I approached students via various UoC mailing lists and UoC-related Facebook groups. Overall, 128 students (16 groups of 8 participants) participated for monetary compensation (8 €) or course credit. The sample consisted of 89 (69%) female and 39 (31%) male subjects (see Table 12). The average age was 24.41 years ($SD = 5.19$). Participants came from a variety of fields of study; most frequent were psychology (47%), media sciences (14%), and biology (11%).

Procedure

One week in advance, all participants filled in an online background survey²⁷ and chose a date for the experiment on site.²⁸ Upon arrival at the laboratory, all participants read and agreed to an informed consent. In both conditions, participants arrived in groups of eight and were given instructions to simulate a social event (networking vs. regular social event) with assigned roles for

²⁷ Because this study was part of a larger research project, I also assessed the dark triad of personality in the background survey with the 12-item “dirty dozen” questionnaire (Jonason & Webster, 2010). Results were presented at the Congress of Society of Industrial and Organizational Psychology (Wingender & Wolff, 2017).

²⁸ The experiment took place from Monday till Friday between 12 am and 4 pm. I randomly assigned dates to the conditions. When choosing a date, participants had no idea which condition they registered for and I made sure they did not register in groups.

20 minutes. After engaging in the respective task, all subjects were led to another room where they performed an ostensible product test for five minutes, tasting and rating candy as a measure of self-control. Afterwards, all participants self-reported their State Self-Control Capacity²⁹ and Positive Affect³⁰ and filled out a post-test survey. Then all participants were thanked and paid. After data collection was over, they were debriefed via email.

Measures

Experimental manipulation

Experimental condition

The networking manipulation ($N = 64$)³¹ was the same as in Experiment 1 (Appendix A; see also de Janasz & Forret, 2008). Participants were instructed to simulate a networking event with assigned roles. Role descriptions were the same as in Study 1 (see Table 4). As in the first experiment, participants were informed that the one person who successfully found both target persons and was nominated by most of the seven interaction partners as the “best networker” would

²⁹ I decided not to change the order of the dependent self-control measures as I attached more importance to the behavioral measure of self-control because they seem less prone to motivational biases and do not necessarily require introspective access (cf. Hofmann et al., 2005; see Discussion of Study 1).

³⁰ Because this study was part of a larger research project, I also assessed feelings of dirtiness with five items that were integrated in the PANAS. Results were presented at the Congress of Society of Industrial and Organizational Psychology (Wingender & Wolff, 2017).

³¹ To determine the adequate sample size, I *a priori* (as opposed to “unplanned optional stopping rules”, Schönbrodt, Wagenmakers, Zehetleitner, & Perugini, 2017, p. 322) defined the following procedure: First, I ran the experiment with two control groups, which I then compared with two randomly selected NW groups from Experiment 1. Based on the calculated effect size ($d = 0.58$) and with a power of 95% (one-tailed), G*power determined an intended total sample size of 132 participants.

receive a bonus of 10 € upon completion of the experiment. After reading the instructions and preparing their roles for three minutes, participants started to engage in the networking task.

Control condition

Social activities outside of work include activities such as going to a party arranged by an acquaintance (Sonnentag, 2001). The proximal purpose of such events is not instrumental networking, yet, all participants are aware of their own professional and private identity. Thus, participants in the control group ($N = 64$) were instructed to simulate a social event with assigned roles (Appendix G). Role descriptions (see Table 11), as in the networking condition, specified the profession and a private interest. However, other than in the networking condition, the instructions neither challenged participants to obtain specific resources nor to make a particularly favorable impression to their interaction partners. Participants were informed that a bonus of 10 € would be raffled at the end of the experiment, and that the lottery was completely irrespective of their behavior in the social interaction.

Table 11

Sample Roles in the Social Control Condition

Doctor.

You are an engaged *SPD* party member. You are a surgeon.

Lawyer.

You love sailing and toy with the idea of buying a boat. You are a lawyer.

Dependent variables*Self-control depletion (candy consumption)*

I used the same depletion measure as in Experiment 1 (see also Hofmann et al., 2007; Imhoff et al., 2014). Again, participants were instructed to taste and rate candy. More candy consumption indicated higher levels of depletion of self-control.

One participant in the networking group reported to be allergic and was therefore excluded from all analyses on candy consumption. I screened for univariate outliers ($SD > 3$) and identified three participants in the networking condition who were more than three standard deviations above the overall mean ($M = 15.28$, $SD = 13.67$). One participant in the social interaction condition did not eat any candy without reporting a reason. All analyses reported were conducted both with and without these four outliers ($.00$ or > 56.29). However, because results did not substantively differ, the analyses reported below are based on the full sample.

Self-control (self-rated)

I used the same nine items from the State Self-Control Capacity Scale as in Experiment 1 (Appendix C; Bertrams et al., 2011). Sample items of the SSCCS include “I feel drained”, “I feel like my willpower is gone”, and “I would want to quit any difficult task I was given”. Again, participants rated their self-control on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), $\alpha = .86$.

Positive Affect

I measured positive affect with ten items from the widely used Positive and Negative Affect Schedule (PANAS, Watson, Clark, & Tellegen, 1988; German version: Krohne, Egloff,

Kohlmann, & Tausch, 1996; Appendix H). A number of studies confirm a high reliability ($\alpha = .86$ - .90, Watson et al., 1988) and validity (e.g., Crawford & Henry, 2004, Krohne et al., 1996) of the PANAS. Sample items include “active”, “determined”, and “proud”. Participants were asked to indicate to what extent they felt this way at the present moment on a 5-point Likert scale (1 = *not at all*, 5 = *extremely*), $\alpha = .89$.

Mediating variable

Impression management

In the post-test, I used an adapted impression management scale that was originally developed to assess impression management as a trait (Mummendey, & Eifler, 1994; Appendix I). I adapted eight of the original 17 items to measure impression management behaviors during the experimental interaction. Sample items were “During the social situation in the experiment, I did not try to appeal to my interaction partners” (reversed), “During the social interaction in the experiment, I did not try to make a favorable first impression” (reversed), and “During the social situation in the experiment, I tried to attract interest by making qualified contributions”. Participants reported their impression management behavior on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), $\alpha = .68$. The internal consistency of the scale is relatively low. However, it almost meets the “alpha > .70 rule” (Guide Jr. & Ketokivi, 2015, p. 6). Some scholars even suggest that .60 might be the acceptable lower bound of reliability for research purposes (e.g., Loewenthal, 1996; Nunnally, 1978).

Control variables

Liking of the product

As part of the product rating test, participants reported how much they liked the product on a 7-point Likert scale, ranging from 1 (*not at all*) to 7 (*very much*).

Hunger

In the post-test, participants were asked if they had been hungry before they entered the experiment. Analyses were repeated including hunger as control variable, but results were essentially identical. Therefore, following Becker (2005), I report results without controlling for hunger.

Body Mass Index

Furthermore, participants indicated their height and weight in the online survey so that I could calculate their BMI. However, because results did not substantively differ with or without including BMI as a control variable, I report results without controlling for BMI.

Demographics

In the online survey, participants also indicated their gender, age, and field of study. However, results did not substantively differ with or without including demographic variables as controls. Thus, I report results without controlling for gender, age, or field of study.

Results

Table 12 displays the descriptive statistics, reliabilities, and correlations of the study variables. As in Experiment 1, the behavioral measure of depletion of self-control and the self-report measure of self-control were not correlated, neither for the whole sample, $r = .07, p = .437$ (see Table 12), nor within conditions, networking: $r = .15, p = .255$, social interaction: $r = .03, p = .843$.

Allocation of participants to the two conditions was independent of age, $t(126) = 0.65, p = .520, d = 0.11$, and gender, $\chi^2 = 0.92, p = .337$. Likewise, the experimental conditions did not significantly differ with regard to hunger, $t(126) = .21, p = .838, d = 0.05$, and liking of the product, $t(122) = -1.66, p = .099, d = 0.29$. However, for liking of the product, I found marginal differences between the groups, with participants in the networking condition ($M = 5.52, SD = 1.36$) reporting slightly more product liking than the social interaction group ($M = 5.10, SD = 1.51$). The effect size ($d = 0.29$) according to Cohen (1988) is small. These marginal differences between the two groups might be relevant in the context of results for positive affect (see Discussion of Study 2).

Table 12

Descriptive Statistics, Reliabilities, and Correlations between Study Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Networking ^a	0.50	0.50								
2. Gender ^b	0.30	0.46	.09							
3. Age	24.41	5.19	-.06	.15						
4. Hunger ^c	0.24	0.43	.02	.10	.04					
5. Product liking	5.31	1.45	.15 [†]	-.01	-.06	.10				
6. Impression management	4.55	0.94	.32***	-.13	-.17	-.09	.25**	(.68)		
7. Positive affect ^d	3.27	0.72	.17 [†]	-.07	-.19*	-.08	.28**	.40**	(.89)	
8. Self-Control ^e	5.44	1.00	-.05	-.05	-.11	-.10	-.03	.16	.47**	(.86)
9. Self-control depletion ^f	15.28	13.67	.43***	.21*	-.05	.01	.37**	.34**	.22*	.07

Note. $N = 128$. Cronbach's alphas are listed on the diagonal.

^aNetworking (Reference group: Social interaction). ^bGender (0 = female, 1 = male). ^cHunger (0 = no, 1 = yes). ^dPositive affect ($N = 127$). ^eSelf-Control (self-rated, $N = 127$). ^fSelf-Control depletion (candy consumption in grams, $N = 127$).

[†] $p < .10$. * $p < .05$, ** $p < .01$.

Table 13 displays results for the two experimental conditions regarding the dependent measures. In order to examine the substantive hypotheses, I conducted hierarchical regression analyses. As recommended by Cho and Abe (2013), all hypotheses were tested in a one-tailed way. I report results separately for the two measures of self-control.

Table 13

Descriptive Statistics for Dependent Measures

Variable	Condition	<i>N</i>	<i>M</i>	<i>SD</i>
Self-Control depletion ^a	Networking	63	21.21	15.25
	Social interaction	64	9.44	8.64
Self-control ^b	Networking	64	5.39	1.02
	Social interaction	63	5.48	0.99
Positive affect	Networking	64	3.39	0.78
	Social interaction	63	3.14	0.65

Note. ^aSelf-Control depletion (candy consumption in grams). ^bSelf-control (self-rated).

Energy resource drain

Self-control depletion (candy consumption)

Hypothesis 1a predicted that networking behavior would deplete self-control resources. In Step 1, I controlled for liking of the product, which was significantly related to candy consumption, $\beta = .37, p \leq .001$ (see Table 14). Adding networking (dummy-coded condition, 1 = networking) in Step 2 of the regression resulted in a significant increase in R^2 , $\Delta R^2 = .15, p \leq .001$, and the regression coefficient turned out to be positive and significant, $\beta = .39, p \leq .001$. Thus, participants in the networking condition consumed significantly more candy than participants in the control condition, indicating greater depletion in the networking group (see Figure 10). Therefore, Hypothesis 1a received support.

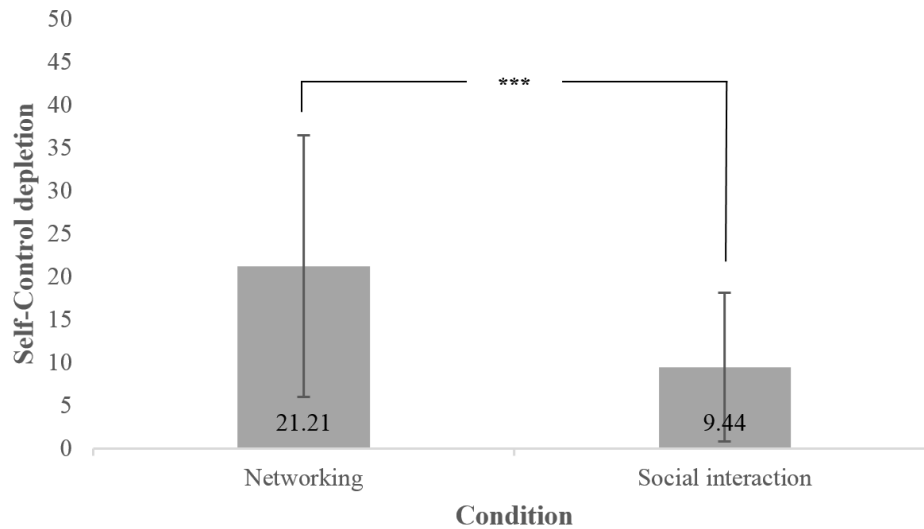


Figure 10. Difference between conditions in self-control depletion.
 Self-control depletion: Candy consumption in grams.
 *** $p < .001$.

Hypothesis 1b predicted that impression management behavior would mediate the effect of networking behavior on self-control depletion. Following the procedure suggested by Preacher & Hayes (2004), I tested the indirect effect of impression management, $\beta = .05$, 95% CI [.008, .115] (see Figure 11, see also Table 14). The bias-corrected bootstrap confidence interval for the indirect effect was entirely above zero, indicating that the indirect effect of impression management is significant. Thus, Hypothesis 1b received support, as the effect of networking behavior on self-control depletion was partially mediated by impression management.

Table 14

Regression of Self-Control Depletion on Condition and Impression Management

Steps		Unstandardized		Standardized	R^2	ΔR^2
		Coefficients		Coefficients		
		b	SE	β		
1	-	-	-	-	.14***	
	Product liking	3.51	0.80	.37***	-	-
2	-	-	-	-	.29***	.15***
	Product liking	2.96	0.74	.31***	-	-
	Networking ^a	10.67	2.12	.39***	-	-
3	-	-	-	-	.31***	.02 [†]
	Product liking	2.67	0.75	.28***	-	-
	Networking	9.36	2.22	.34***	-	-
	Impression management	2.24	1.19	.16*	-	-

Note. $N = 127$. Dependent variable: Candy consumption in grams.

^aNetworking (0 = social interaction, 1 = networking).

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

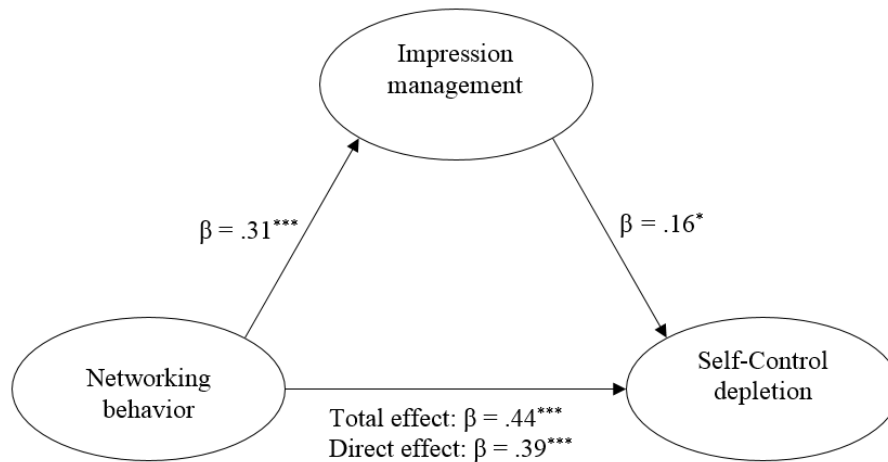


Figure 11. Mediating effect of impression management.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Self-control (self-rated)

Hypothesis 1a predicted that networking behavior would deplete self-control. As can be seen in Table 15, the regression coefficient of networking was not significant, $\beta = -.05$, $p = .611$, indicating that participants in the networking and control group did not differ regarding their self-reported self-control. Thus, with regard to the self-report measure of self-control, I found no support for Hypothesis 1a.

Likewise, because networking had no significant effect on self-control, Hypothesis 1b could not be supported. However, impression management had a significant main effect on self-control, $\beta = .19$, $p = .042$, indicating that, contrasting expectations, impression management during the social interaction marginally increased self-reported self-control capacity (Appendix J).

Table 15

Regression of Self-Rated Self-Control on Condition

	Unstandardized		Standardized	R^2
	Coefficients		Coefficients	
	b	SE	β	
Networking ^a	-.09	0.18	-.05	.00

Note. $N = 127$. Dependent variable: Candy consumption in grams.

^aNetworking (0 = social interaction, 1 = networking).

Energy resource gain***Positive affect***

Hypothesis 2 predicted that participants in the networking condition would experience more positive affect than participants in the control condition. In support of Hypothesis 2,

networking was significantly and positively related to positive affect, $\beta = .25$, $p = .028$ (see Table 16 and Figure 12).

Table 16

Regression of Positive Affect on Condition

	Unstandardized		Standardized	R^2
	Coefficients		Coefficients	
	b	SE	β	
Networking ^a	.25	0.13	.17 [*]	.03 [†]

Note. $N = 127$. Dependent variable: Candy consumption in grams.

^aNetworking (0 = social interaction, 1 = networking).

[†] $p < .10$. ^{*} $p < .05$.

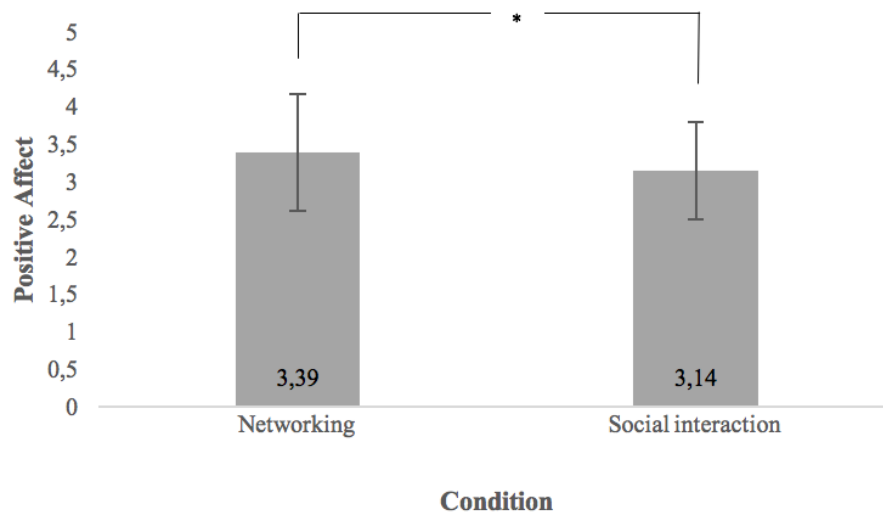


Figure 12. Difference between conditions in positive affect.

^{*} $p < .05$.

Discussion

Study 2 represents a conceptual replication of Study 1, focusing on both the dark and bright side of networking behavior. On the dark side, I took a more nuanced look at the energy resource drain process of networking behavior. Also, I considered a potential mechanism of the depleting effect of networking behavior, namely impression management. On the bright side, I sought to establish the energy resource gain process of networking behavior, as manifested by enhanced affective states. Therefore, I conducted a laboratory experiment with 128 students, engaging in either the networking or a social control task.

On the dark side, I found further support for the hypothesis that networking (relative to “normal” social interaction) depletes self-control resources (as indicated by increased candy consumption). Furthermore, I identified impression management as a mechanism of the depleting effect of networking. Participants in the networking condition exerted more impression management, which, in turn, depleted self-control resources (cf. Table 14 and Figure 11). This is in line with self-control research, showing that impression management depletes self-control resources (e.g., Karremans et al., 2009; Vohs et al., 2005). However, the effect of impression management was rather small and can explain only part of self-control depletion following networking. Therefore, networking behavior likely encompasses further processes that deplete self-regulatory resources (e.g., goal-directedness, emotion regulation).

As in Experiment 1, I found no support for the hypothesis that networking behavior decreases self-rated self-control. That is, participants in the networking and control conditions did not significantly differ regarding their self-rated self-control. Explanations for this unexpected finding are discussed below.

On the bright side, I found support for the hypothesis that networking behavior generates resources, as manifested by augmented positive affect. That is, participants in the networking condition reported significantly more positive affect than participants in the social control condition.

Taken together, I found empirical support for both the energy resource drain and energy resource gain process of networking behavior. Yet, despite the distinct strengths of the experimental design (see also Discussion of Study 1 and General Discussion), Study 2 is not without limitations. First, as in the first experiment, self-rated self-control was measured after the product test. Thus, as discussed above, participants might have been able to replenish their self-control resources during the product test.³² The same applied to positive affect, which was measured at the end of the experiment. Also, participants in the networking and control condition marginally differed regarding product liking. Therefore, I cannot completely rule out the possibility that positive affect might have been affected by participants' liking of the candy. In fact, product liking and positive affect were significantly correlated (see Table 12). However, networking still predicted positive affect when controlling for liking of the product, $\beta = .17$, $p = .03$. Still, to exclude such alternative explanations, findings should be replicated without participants tasting candy before self-reporting their positive affect. Therefore, in Study 3, I replicate results with a different behavioral measure of self-control depletion.

Also, Study 2 might involve a weakness regarding external validity (cf. Shadish et al., 2002). As in Study 1, I used student samples engaging in simulated role-plays. As discussed before,

³² I did not change the order of the two measures, because I attach more importance to the behavioral measure of self-control (relative to the self-report measure). Behavioral measures are suggested to be less prone to motivational biases in self-reports (e.g., social desirability bias), and do not necessarily require introspective access (cf. Hofmann et al., 2005; see Discussion of Study 1 for a more detailed comparison of behavioral and self-report measures of self-control).

I am quite confident that the simulated networking situation is highly representative for real networking situations. However, to ensure external validity, findings should be replicated with a working sample in a real networking situation. Therefore, in Study 3, I collected data in the field at real networking events.

Study 3

In Study 2, I examined both energy resource drain and energy resource gain following networking behavior. On the dark side, I replicated results from Study 1, showing that networking behavior leads to self-control depletion. Additionally, I identified impression management as a mechanism of the depleting effect of networking. On the bright side, I found that networking behavior generates resources, as manifested by improved affect.

Whereas the experimental designs used in Studies 1 and 2 provide high internal validity, replicating results with a working sample in natural networking situations strengthens external validity. Also, scholars recently called for greater use of field studies in order to test hypotheses based on conservation of resources theory (e.g., Halbesleben et al., 2014).

Therefore, in Study 3, I seek to replicate results from Studies 1 and 2 in the field. Networking events are defined as “forums for initiating acquaintanceships” (Ingram & Morris, 2007, p. 559) that are focused on the “proximal objective of cementing professional network relationships” (Bergemann et al., 2017, p. 3). Hence, a networking event represents the prototype of a networking situation. Therefore, I performed a field study with 162 attendees of multiple ($k = 12$) networking events, using a pre-test and post-test design (Shadish et al., 2002).

Hypotheses

Figure 13 depicts an overview of the hypotheses in Study 3.

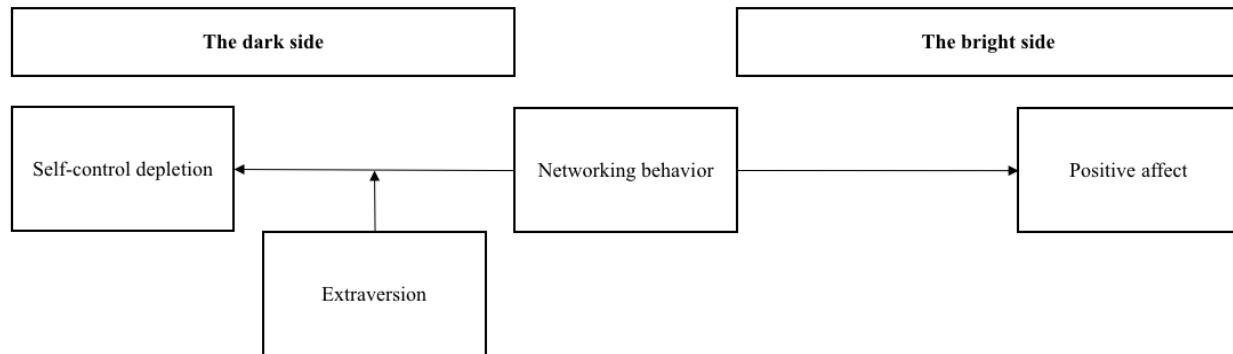


Figure 13. Overview of hypotheses in Study 3.

Energy resource drain

According to the energy resource drain process, networking behavior depletes self-regulatory energy resources. In Studies 1 and 2, I found support for self-regulatory energy resource drain following networking, as manifested by increased candy consumption. However, both studies were conducted in highly controlled experimental settings. In fact, most self-control research has been run in laboratory settings (e.g., Baumeister et al., 1998; Vohs et al., 2005). This raises the question if the findings can be effectively transferred to natural networking situations like a real networking event. Recent studies conducted in employees' natural work contexts show that, on a daily basis, employees' proactive, social, and helping behaviors at work are associated with self-reported depletion (Lanaj, Johnson, & Wang, 2016), co-workers' reports of end-of-workday fatigue (Troughakos et al., 2014) and higher cortisol output (as a biological marker of stress, Fay & Hüttges, 2016). As networking behavior is similar to proactive, social, and helping behaviors at work, I hypothesize that attending a networking event depletes individuals' self-

control resources. More specifically, attendees should have higher levels of self-control resources before entering a networking event than after leaving the event.

Hypothesis 1a: Attending a networking event depletes self-control.

However, attending the same event might have different implications for attendees' self-control depletion, depending on the intensity of their networking behavior at the event. By way of example: At a three hours networking event, two attendees spending the same time at the event might likely put considerably different levels of effort in their networking activities at the event. Whereas one attendee might speak for only 30 minutes with one single contact and walk around solely for the rest of the time, the other participant might network for three full hours, thereby introducing him or herself to multiple new contacts and reencountering acquaintances. I argue that more intense networking, as characterized by more time spent networking and more unique interactions with networking contacts, should consume more self-control resources. Thus, I suggest that an individuals' networking intensity at the event moderates the extent of self-control depletion after the networking event.

Hypothesis 1b: Networking intensity moderates the depleting effect of attending a networking event.

Furthermore, I seek to investigate boundary conditions of the postulated energy resource drain process. COR theory proposes that the process of resource loss is dependent on an individuals' personality (Hobfoll et al., 1990). Supporting this notion, self-control research suggests that behaviors that correspond to people's disposition, such as extraverts behaving in an extraverted manner have less impairing effects on subsequent self-control resource states (e.g., Gallagher et al., 2011; Zelenski et al., 2012; Vohs et al., 2005). Based on the proposed model of networking behavior (cf. Figure 3), in Study 1, I sought to identify constructive resources (i.e.,

personality traits, Hobfoll, 2001; ten Brummelhuis & Bakker, 2012), which might be able to buffer against the depleting effect of networking. More specifically, I examined extraversion as a potential moderator as networking behavior should correspond to extraverts' dispositional behavior. In contrast, for introverts, networking behavior rather counteracts their dispositional behavior. In line with the hypothesis, in Study 1, I found evidence for a buffering effect of extraversion. In Study 3, I seek to replicate this finding. I argue that, when attending a networking event, intense networking behavior is less depleting for extraverts relative to introverts (cf. Figure 14).

Hypothesis 1c: Extraversion moderates the depleting effect of networking intensity when attending a networking event.

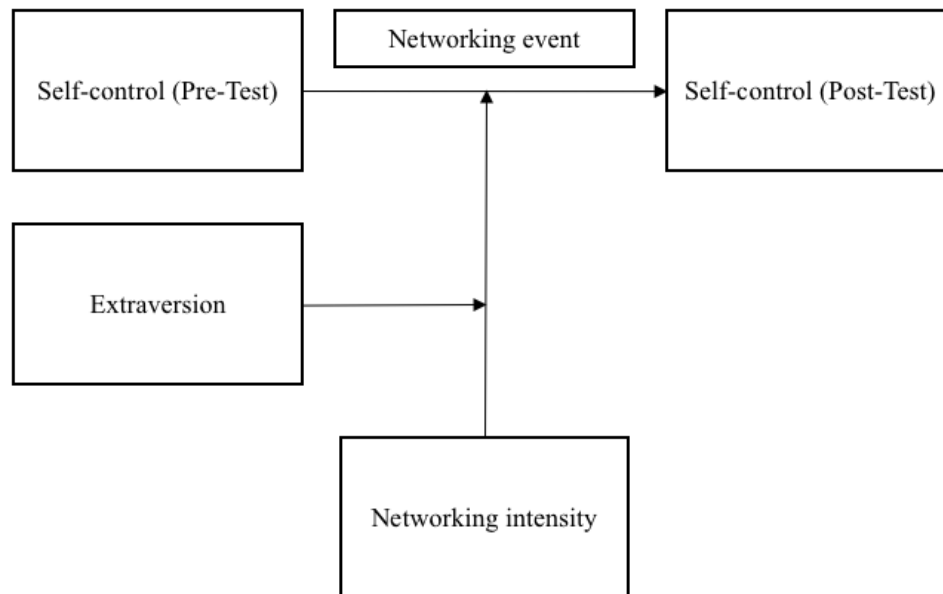


Figure 14. Extraversion moderates the depleting effect of intense networking behavior when attending a networking event.

Energy resource gain

According to the energy resource gain process, networking behavior generates affective energy resources. This is in line with COR theory, suggesting that people who strategically invest resources expect their investments to pay off (Hobfoll, 2001). In a similar vein, Ingram and Morris (2007) state that individuals who attend a networking event anticipate return on their investments in terms of encounters that take place in the context of the event. This actual or anticipated resource gain should be manifested by augmented affective energy resource states (cf. Halbesleben et al., 2014; ten Brummelhuis & Bakker, 2012). Accordingly, in Study 2, I found that networking behavior improves positive affect. In Study 3, I seek to replicate this finding, arguing that attending a networking event should improve affect. That is, attendees' should experience more positive affect after leaving the event than before entering the event.

Hypothesis 2a: Attending a networking event increases positive affect.

COR conceptualizes networking relationships as resources (cf. Hobfoll, 2001). Building on this notion, interacting with a networking contact at a networking event means to create or foster a resource. Accordingly, more networking interactions at an event imply that a person gains more resources. Likewise, spending more time networking should increase the likelihood of attaining networking resources. In this vein, more intense networking (i.e., more networking interactions and more time spent networking) should yield more resource gain and, hence, reinforce the positive effect of attending a networking event on mood. Therefore, I argue that the increase in positive affect after the event should be augmented by networking intensity.

Hypothesis 2b: Networking intensity moderates the effect of attending a networking event on positive affect.

Method

Setting

I gathered data at twelve networking events taking place in North-Rhine-Westphalia (e.g., Cologne, Düsseldorf, and Dortmund). Bergemann and colleagues (2017) define networking events as “planned meetings with a proximal objective of cementing professional network relationships. They are planned by organizations, associations and clubs to help their members build network relations” (p. 3). All events included in the present study were explicitly described as “networking events” in the advertising (see Table 17) and covered a broad range of possible versions of networking events (see Shadish et al., 2002, see Table 18). Out of the twelve events, four events contained set networking tasks that explicitly instructed attendees to network with one another. For example, participants were asked to perform a professional speed dating round or an elevator pitch (short self-presentation, de Janasz & Forret, 2008). The events started at various times between 8.30 am (“networking breakfast”) and 7.30 pm (“networking dinner”). The duration of the events ranged between 1.5 and 8.5 hours ($M = 3.25$, $SD = 1.96$). Half of the events explicitly addressed entrepreneurs, one event aimed at post-docs, whereas the other events were open for all professional groups. Two of the events were for women only; at the mixed events, the percentage of female attendees varied between 10% and 88% ($M = 39.80$, $SD = 27.36$). The largest events had about 650 participants (based on participant registrations), whereas the smallest event was attended by nine people ($M = 134.83$, $SD = 241.33$). The experimenter was able to gather usable data of six to 28 study participants at the events ($M = 13.50$, $SD = 6.29$).

Participants

In total, 174 persons agreed to participate in the study in exchange for monetary compensation/donations (5 €) or equivalent give-aways. Eleven of them did not return for the post-test and one person did not complete the full post-test (dropout rate: 7%). These twelve participants were therefore excluded from all analyses. Thus, the final sample included 162 participants, of which 69 (42.6%) were female and 93 (57.4%) were male (see Table 19). The average age was 35.05 years ($SD = 10.57$). Out of the sample, 39.5% indicated to hold a supervisor position. The sample consisted of 71 self-employed (43.8%), 52 employees (32.1%), 30 students (18.5%), and nine job-seekers (5.6%). The great portion of self-employed persons in the sample highlights the importance of networking behavior for entrepreneurs (cf. Entrepreneurial success), and reflects the fact that half of the networking events explicitly addressed entrepreneurs (see Table 18).

Table 17

Sample Event Advertising

Postdoc Networking Event^a

The Faculty and Academic Staff Development Department supports you in building your network with other postdocs at the UoC as well as regionally, nationally and internationally. We cordially invite you to take part in our interactive postdoc networking event. In the framework of a “speed dating” session, there are ample opportunities to get to know one another and to exchange interdisciplinary and international experiences.

Xing Business Dinner^b

We have organized another Business Dinner (also known as Cross-Table or Rotation Dinner) at the Pullman Hotel. We will serve a three-course menu – and you will change tables for every course. Thus, you will get to know at least 3×5 interesting people.

7 pm reception

7.45 – 10 pm Dinner with changing tables for every course

afterwards Networking at the bar.

Note. ^aUniversity of Cologne Administration. Academic Staff Development (2016). ^bXing Ambassador Cologne (2016).

Table 18

Overview of Networking Events

Event No	NW Task	Start Time	Duration^a	Target group	Women only	Percentage Women	Event Participants	Study Participants
1	no	8.30 am	1.5	not specified	no	58	12	10
2	no	10 am	2.0	not specified	no	56	9	6
3	no	10 am	2.0	not specified	no	71	24	10
4	yes	10 am	2.0	entrepreneurs	yes	100	24	13
5	no	11 am	8.5	entrepreneurs	no	12	60	14
6	yes	5 pm	2.5	academics	no	88	16	6
7	no	6 pm	2.0	entrepreneurs	no	20	60	14
8	no	6 pm	4.0	entrepreneurs	no	20	650	28
9	no	7 pm	5.0	entrepreneurs	no	20	650	12
10	no	7 pm	3.0	entrepreneurs	no	10	50	19
11	yes	7 pm	4.0	not specified	no	43	47	20
12	yes	7.30 pm	2.5	not specified	yes	100	16	10

Note. ^aDuration (in hours).

Procedure

Upon arrival at the networking event, those who agreed to participate in the study performed a pre-test that served as a baseline. They engaged in the handgrip task as a measure of self-control and completed a brief survey. Before they left the event, participants engaged in a post-test. Again, they performed the handgrip task and filled out a survey. Then, participants were thanked and paid. Those who left their email address were debriefed after data collection was over.

Measures

Dependent Measures

The field setting and within-person (i.e., pre-post test) design in Study 3 was very different from the laboratory setting and between-person designs in Studies 1 and 2. Therefore, I used dependent measures that were more adequate for the setting and design in Study 3. That is, first, I used a behavioral measure of self-control (i.e., handgrip performance) that has been typically measured twice in a pre-test and post-test in prior studies (e.g., Martijn et al., 2007).³³ Second, I used survey measures for depletion³⁴ and positive affect (i.e., Brief Mood Inspection Scale) that are more economic than the SSCCS and PANAS used in Studies 1 and 2.

³³ Also, as discussed above (see Discussion of Study 2), findings from Study 2 should be replicated without participants tasting candy before self-reporting their positive affect.

³⁴ By changing the measure of self-reported depletion, I also reacted to the surprising findings of Studies 1 and 2 regarding the results of self-rated self-control, as measured with the State Self-Control Capacity Scale (Bertrams et al., 2011).

Self-control (handgrip)

Squeezing a handgrip becomes tiring after a short period of time, and the person feels the urge to stop squeezing (cf. Alberts, Martijn, Greb, Merckelbach, & de Vries 2007). Overcoming this fatigue and overriding the urge to quit requires self-control. Accordingly, in a meta-analysis, the handgrip task has been found to be a valid measure of self-control ($d = 0.64$, Hagger et al, 2010). Because most people think that a handgrip primarily depends on muscular strength, it is a relatively unobtrusive measure of self-control (cf. Alberts et al., 2007). In most studies, as to being able to control for individual differences in hand strength, handgrip stamina has been measured twice, with a pre-test at the beginning and a post-test after the self-control manipulation (e.g., Martijn et al., 2007; Muraven et al., 1998; Tyler & Burns, 2008). Then, the difference between the two measurements is computed; a greater decline indicates more self-control depletion. In the present study, in order to minimize experimenter effects, the experimenter used a written protocol throughout the whole procedure; that is, instructions were the same for all participants. To cover the purpose of the study, participants were informed that the experimenter collected pilot data for a sports psychology study and that two assessments would be taken at separate times and then averaged to get the most accurate estimates. The experimenter then placed a pencil between the grips and instructed participants to squeeze the handgrip for as long as they could. The experimenter started a stopwatch when participants closed the grip and stopped when the pencil fell out and noted the time in seconds.

Self-control depletion (self-rated)

Building on the theorizing that people experience subjective depletion when self-control resources are taxed, there exist questionnaire measures with varying conceptualizations of an

individuals' energy state (e.g., depletion, for an overview, see Hagger et al., 2010; Trougakos et al., 2014; cf. Ego Depletion Theory). As a measure of depletion, I used a composite measure consisting of six items: That is, four items referring to the energy (active, peppy) and tiredness (tired, drowsy) components from the German translation of the Brief Mood Inspection Scale (BMIS, Mayer, & Gaschke, 1988) as well as two additional items (fit and exhausted, based on Alberts et al., 2007; Appendix I). Participants reported their depletion twice, in the pre-test and in the post-test. They rated their level of depletion on a five-point Likert response format (1 = *strongly disagree* to 5 = *strongly agree*), pre-test: $\alpha = .82$, post-test: $\alpha = .88$.

Positive affect

Positive affect was measured with six items referring to three positive mood states of the Brief Mood Inspection Scale (BMIS, Mayer, & Gaschke, 1988; Appendix K): (1) happy (happy, lively), (2) loving (loving, caring), and (3) calm (calm, content). Participants filled out the BMIS in the pre-test as well as in the post-test. Participants used a five-point Likert response scale (1 = *strongly disagree* to 5 = *strongly agree*) to rate their current level of positive affect, pre-test: $\alpha = .81$, post-test: $\alpha = .82$.

Moderator variables

Networking intensity

In the post-test, I measured networking intensity with two items, asking participants to estimate how much time they had spent networking at the event and to gauge the number of people they had networked with at the event. This is in line with prior studies, measuring networking by the time invested in networking (e.g., Aldrich, Elam & Reese, 1996) or by the volume of unique

interactions at a networking event (Bergemann et al., 2017). The two variables were standardized within events and summed to form a scale of individuals' networking intensity. Cronbach's Alpha was relatively low, $\alpha = .63$. This can be attributed to the small number and breadth of the items included. Yet, the reliability almost meets the "alpha > .70 rule" (Guide Jr. & Ketokivi, 2015, p. 6) and some scholars even suggest that .60 might be the acceptable lower bound of reliability for research purposes (e.g., Loewenthal, 1996; Nunnally, 1978).

Extraversion

In the pre-test, extraversion was measured with twelve items derived from the NEO-FFI (Costa & McCrae, 1995; German version: Borkenau & Ostendorf, 2008; Appendix D; see also Study 1;). Sample items are "I like to have a lot of people around me", "I really enjoy talking to people", and "I usually prefer to do things alone" (reversed). Participants used a five-point Likert response format (1 = *strongly disagree* to 5 = *strongly agree*) to rate their level of extraversion, $\alpha = .81$.

Control variable

Time at the event

The experimenter noted the time of each individuals' pre-test (upon arrival at the event) and post-test (upon departure from the event). I later calculated the time passed in between pre-test and post-test. All analyses were conducted both with and without controlling for time spent at the event. However, because results were essentially identical, I report results without controlling for individuals' time at the event.

Demographics

Participants were asked to specify their gender and age in the post-test. Furthermore, they indicated their occupational status (self-employed, employee, student, or unemployed) and whether or not they held a supervisor's position. Analyses were repeated controlling for all demographic variables, but results were essentially identical. Therefore, I report results without controlling for demographic variables.

Analyses

I analyzed the data with a multilevel random coefficient model using HLM (Version 7, Raudenbush, Bryk, Cheong, Congdon, & du Toit, 2011), thereby accommodating the three-level data structure with occasions (pre-test and post-test) nested within persons and with persons nested within events. Thus, I considered nesting of persons within events. However, I did not specify any event-level predictors, because I do not focus on differences between events and I relied on a relatively small sample size of events.³⁵

To test whether analyzing the data with HLM is appropriate, I examined the occasion-level (within-person), the person-level (between-person) as well as the event-level (between-group) variance for all occasion-level study variables (cf. Tables 20 to 24). For self-control (handgrip performance), 43.49% of the overall variance was at the occasion-level ($\sigma^2 = 520.45$, $SD_e = 57.83$), 44.75% was at the person-level, and 11.76% was at the event-level. For self-rated depletion, 47.63% of the variance explained was at the occasion-level ($\sigma^2 = 0.26$, $SD_e = 0.03$), 42.14% was at the person-level, and 10.23% was at the event-level. For positive affect, 24.52% of the overall

³⁵ Also, as can be seen in the results section, the variance components on the event-level are relatively low, thus implying to focus on occasion- and person-level differences.

variance was at the occasion-level ($\sigma^2 = 0.11$, $SD_{\epsilon} = 0.01$), 71.06% was at the person-level, and 4.42% was at the event-level. All occasion-level and person-level variance components are within the range labelled as substantial by other scholars (e.g., Ilies, Schwind, & Heller, 2007: variances between 21% and 71%). Thus, a substantive portion of the overall variance explained in all dependent variables was due to variance at the occasion-level as well as person-level, making a multilevel approach most appropriate for examining the research questions.³⁶

As recommended by Cho and Abe (2013), all hypotheses were tested in a one-tailed way. All dependent measures (handgrip, depletion, positive affect) were measured twice (pre- and post-test). Therefore, I used a dummy-coded variable indicating the change from pre-test to post-test. Networking intensity was centered at the respective event mean (group-mean centering, Enders & Tofighi, 2007).³⁷ Thereby, I was able to consider differences between attendees of the same event. Extraversion was centered at the grand mean to account for deviances from the full sample's mean.³⁸ I entered the respective variables into the models predicting self-control depletion (handgrip performance, self-rated depletion) and positive affect in the following steps:

³⁶ In contrast, the variance components on the event-level are relatively low.

³⁷ Results did not substantially differ when centering networking intensity at the grand mean.

³⁸ Results did not substantially differ when centering extraversion at the respective event mean.

Hypotheses 1a and 2a.

Step 1 (Model 0). In Step 1, the intercept was the only predictor.

Step 2 (Model 1). In Step 2, I added a dummy-coded variable indicating the change from pre-test to post-test.

Hypotheses 1b and 2b.

Step 3 (Model 2). In Step 3, I added networking intensity.

Step 4 (Model 3). In Step 4, I added the cross-product of Pre-Post Change \times Networking Intensity.

Hypothesis 1c.

Step 1 (Model 0). In Step 1, the intercept was the only predictor.

Step 2 (Model 1). In Step 2, I added a dummy-coded variable indicating the change from pre-test to post-test and all person-level variables.

Step 3 (Model 2). In Step 3, I added all cross-products.

Step 4 (Model 3). In Step 4, I added the three-way cross-product of Pre-Post Change \times Networking Intensity \times Extraversion.

Results

Table 19 displays the descriptive statistics, reliabilities, and correlations of the within- and between person variables.³⁹ Differences from pre-test to post-test in the two measures of self-control (handgrip performance, self-rated depletion) showed the expected significant negative correlation, $r = -.23, p = .003$. The effect size for the change in self-control is small, $d = 0.26$. Thus, the effect size is lower than in the 2010 meta-analysis ($d = 0.64$, Hagger et al., 2010).

³⁹ As recommended by Becker (2005), I report descriptive statistics for the control variable Time at event, even though I did not include Time at event as a control variable, because results are essentially identical with and without controlling for Time at event.

Table 19

Descriptive Statistics, Reliabilities, and Correlations between Study Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
Level 2 (Person)												
1. Gender ^a	0.57	0.50										
2. Age	35.05	10.57	-.02									
3. Employment ^b	0.76	0.43	-.05	.35***								
4. Supervisor ^c	0.40	0.49	.01	.27***	.34***							
5. Extraversion	3.63	0.56	-.14 [†]	.00	.01	.20**	(.81)					
6. Time ^d at event	2.15	0.96	.11	.12	.11	-.06	.06					
7. Time ^d networking	1.42	0.93	.11	.33***	.09	.23**	.15 [†]	.39***				
8. Networking contacts	8.45	5.58	.05	.32***	.17*	.24**	.04	.13	.47***			
Level 1 (Occasion) ^e												
9. Positive Affect	0.10	0.46	-.05	-.12	-.11	-.02	-.05	-.05	.01	.05	(.82)	
10. Depletion ^f	0.13	0.71	.24**	-.05	.09	-.09	-.11	.25***	.06	.03	-.35***	(.85)
11. Self-Control ^g	-8.84	31.13	-.15 [†]	-.04	.01	.01	.04	-.05	-.09	-.03	.16*	-.23**

Note. *N* = 162. Cronbach's alphas on the diagonal.

^aGender (0 = female, 1 = male). ^bEmployment (0 = unemployed, 1 = employed). ^cSupervisor (0 = no; 1 = yes). ^dTime (hours).

^eLevel 1 (Differences between pre- and post-test. Cronbach's alphas are mean alphas of pre- and post-test). ^fDepletion (self-rated). ^gSelf-Control (handgrip in seconds).

[†] $p \leq .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Energy resource drain***Self-control (handgrip)***

Hypothesis 1a predicted that attendees' self-control (i.e., handgrip performance) would decrease from pre-test to post-test. In the null model, the intercept was the only predictor (see Table 20). In the second step, I entered pre-post change. Pre-post change was negatively and significantly related to self-control, estimate = -8.84; $SE = 1.82$, $t = -4.87$, $p \leq .001$, thus confirming Hypothesis 1a.

Hypothesis 1b predicted that networking intensity would moderate depletion of self-control from pre-test to post-test. In Model 2, I entered networking intensity, which had no significant main effect on self-control, estimate = -0.31; $SE = 0.83$, $t = -0.37$, $p = .709$. In the last step, I entered the cross-product of Pre-Post Change \times Networking Intensity, which was negative, but did not reach significance, estimate = -2.52; $SE = 2.14$, $t = -1.18$, $p = .120$ (see Table 20). Thus, Hypothesis 1b was not supported.

Table 20

Multilevel Estimates for Models Predicting Self-Control (Handgrip), a

Variables	Model 0			Model 1			Model 2			Model 3		
	Est.	SE	t	Est.	SE	t	Est.	SE	t	Est.	SE	t
Level 2 (Person) ^a												
Intercept	51.28	4.16	12.32***	51.28	4.16	12.32***	51.28	4.16	12.32***	51.28	4.16	12.32***
Networking							-0.31	0.83	-0.37	-0.31	0.82	-0.37
Level 1 (Occasion) ^b												
Pre-post change ^c				-8.84	1.82	-4.87***	-8.84	1.82	-4.87***	-8.84	1.82	-4.87***
Pre-Post × NW										-2.52	2.14	-1.18
Deviance	3141.18			3128.54			3128.50			3125.91		
Variance components												
Occasion-level	520.45			481.42			481.42			473.76		
Person-level	535.60***			555.12***			554.87***			558.70***		
Event-level	140.76***			140.76***			140.78***			140.78***		

Note. ^aN = 162. ^bN = 324. ^cPre-post change (0 = Pre-test; 1 = Post-test).

*** $p \leq .001$.

Hypothesis 1c predicted that extraversion would act as a buffer against the depleting effect of networking intensity when attending a networking event. Again, in Model 0, the intercept was the only predictor (see Table 21). Next, I entered networking intensity, extraversion, and pre-post change. As before, pre-post change was negatively and significantly related to self-control, estimate = -8.84; $SE = 1.82$, $t = -4.87$, $p \leq .001$, whereas networking intensity had no significant main effect on self-control, estimate = -0.22; $SE = 0.83$, $t = -0.27$, $p = .792$. Likewise, extraversion was not related to self-control, estimate = -0.92; $SE = 1.30$, $t = -0.71$, $p = .480$. In the next step, I entered the cross-products of Pre-Post Change \times Networking Intensity, estimate = -2.70; $SE = 2.16$, $t = -1.25$, $p = .215$, Pre-Post Change \times Extraversion, estimate = 1.81; $SE = 2.19$, $t = 0.83$, $p = .409$, as well as Networking Intensity \times Extraversion, estimate = -0.17; $SE = 0.63$, $t = -0.26$, $p = .792$. Finally, I entered the cross-product of Pre-Post Change \times Networking Intensity \times Extraversion, which turned out to be significant, estimate = 4.06; $SE = 1.54$, $t = 2.63$, $p = .005$.

I used online HLM calculators (Preacher, Curran, & Bauer, 2006) to conduct simple slope tests of the three-way interaction effect (see Figure 15 and Figure 16): When engaging in little networking behavior, neither introverts ($M - 1 SD$), estimate = -1.19, $SD = 3.82$, $z = -0.31$, $p = .755$, nor extraverts ($M + 1 SD$), estimate = -11.68, $SD = 7.77$, $z = -1.50$, $p = .133$, showed diminished self-control. In contrast, when engaging in intense networking behavior, introverts showed a significant decrease in self-control, estimate = -20.45, $SD = 3.42$, $z = -5.98$, $p \leq .001$, whereas for extraverts, engaging in intense networking behavior only had a marginally significant effect on self-control, estimate = -5.75, $SD = 3.33$, $z = -1.73$, $p = .084$. Thus, extraversion buffered against the depleting effect of networking, thereby supporting Hypothesis 1c.

Table 21

Multilevel Estimates for Models Predicting Self-Control (Handgrip), b

Variables	Model 0			Model 1			Model 2			Model 3		
	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>
Level 2 (Person) ^a												
Intercept	51.28	4.16	12.32***	51.25	4.17	12.28***	51.29	4.19	12.25***	51.29	4.19	12.25***
Networking				-0.22	0.83	-0.27	-0.24	0.85	-0.28	-0.24	0.85	-0.28
Extraversion				-0.92	1.30	-0.71	-0.89	1.33	-0.67	-0.89	1.33	-0.67
NW × Extra							-0.17	0.63	-0.26	-0.17	0.63	-0.26
Level 1 (Occasion) ^b												
Pre-post change ^c				-8.84	1.82	-4.87***	-8.84	1.77	-5.01***	-9.77	1.91	-5.11***
Pre-Post × NW							-2.70	2.16	-1.25	-2.15	2.02	-1.07
Pre-Post × Extra							1.81	2.19	0.83	1.05	2.30	0.46
P-P × NW × Extra										4.06	1.54	2.63**
Deviance	3141.18			3128.34			3125.18			3117.19		
Variance component												
Occasion-level	520.45			481.42			472.16			449.42		
Person-level	535.60***			553.50***			557.86***			569.23***		
Event-level	140.76***			142.65***			143.31***			143.31***		

Note. ^a*N* = 162. ^b*N* = 324. ^cPre-post change (0 = Pre-test; 1 = Post-test).

*** *p* ≤ .001. ** *p* ≤ .01.

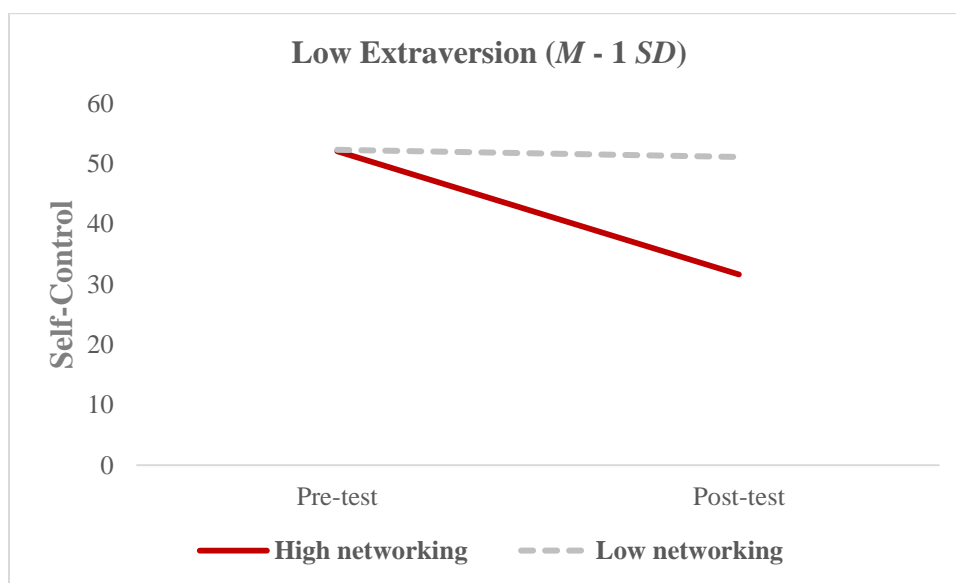


Figure 15. Simple slopes for the interaction between pre-post change and networking intensity on self-control depletion for introverts.
Self-Control: Handgrip performance in seconds.

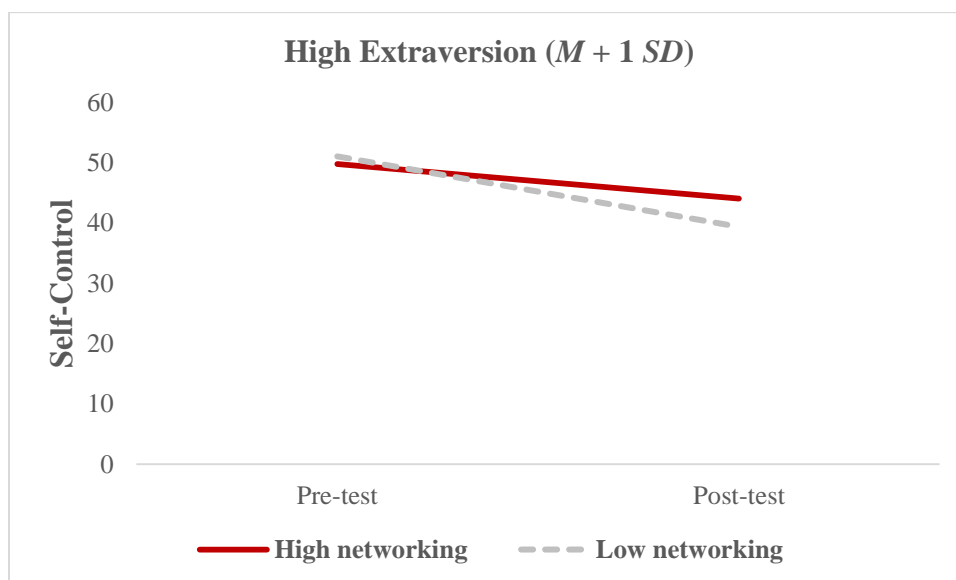


Figure 16. Simple slopes for the interaction between pre-post change and networking intensity on self-control depletion for extraverts.
Self-Control: Handgrip performance in seconds.

Depletion (self-rated)

Hypothesis 1a predicted that depletion would increase from pre-test to post-test. I employed the same procedure as before: In the null model, the intercept was the only predictor (see Table 22). In the second step, I entered pre-post change. Pre-post change was positively and marginally significant related to depletion, estimate = 0.13; $SE = 0.09$, $t = 1.36$, $p = .088$. Thus, Hypothesis 1a received limited support.

Hypothesis 1b predicted that networking intensity would moderate the increase in depletion. In Model 2, I entered networking intensity, which had a marginally significant effect on depletion, estimate = -0.05; $SE = 0.03$, $t = -1.73$, $p = .086$. In the last step, I entered the cross-product of Pre-Post Change \times Networking Intensity, which was not related to depletion, estimate = 0.01; $SE = 0.05$, $t = 0.12$, $p = .451$. Thus, Hypothesis 1b was not supported.

Table 22

Multilevel Estimates for Models Predicting Self-Rated Depletion, a

Variables	Model 0			Model 1			Model 2			Model 3		
	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>
Level 2 (Person) ^a												
Intercept	2.36	0.08	28.14 ^{***}	2.36	0.08	28.14 ^{***}	2.36	0.08	28.15 ^{***}	2.36	0.08	28.15 ^{***}
Networking							-0.05	0.03	-1.73 [†]	-0.05	0.03	-1.73 [†]
Level 1 (Occasion) ^b												
Pre-post change ^c				0.13	0.09	1.36 [†]	0.13	0.09	1.36 [†]	0.13	0.09	1.36 [†]
Pre-Post × NW										0.01	0.05	0.12
Deviance	656.51			656.51			648.16			648.13		
Variance component												
Occasion-level	0.26			0.25			0.25			0.25		
Person-level	0.23 ^{***}			0.23 ^{***}			0.22 ^{***}			0.22 ^{***}		
Event-level	0.06 ^{***}			0.06 ^{***}			0.06 ^{***}			0.06 ^{***}		

Note. ^a*N* = 162. ^b*N* = 324. ^cPre-post change (0 = Pre-test; 1 = Post-test).

[†] $p \leq .10$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$

Hypothesis 1c predicted that extraversion would buffer against the depleting effect of networking intensity when attending a networking event. In Model 1, I entered networking intensity, extraversion, and pre-post change. Networking intensity was no longer related to depletion, estimate = 0.03; $SE = 0.03$, $t = -1.20$, $p = .231$, after adding extraversion; neither was pre-post change, estimate = 0.13; $SE = 0.09$, $t = 1.36$, $p = .176$. In contrast, extraversion was significantly related to depletion, estimate = -0.21; $SE = 0.04$, $t = -4.96$, $p \leq .001$. In the next step, I entered the cross-products of Pre-Post Change \times Networking Intensity, estimate = 0.01; $SE = 0.05$, $t = 0.29$, $p = .776$, Pre-Post Change \times Extraversion, estimate = -0.08; $SE = 0.08$, $t = -1.05$, $p = .294$, and Networking Intensity \times Extraversion, estimate = 0.05; $SE = 0.02$, $t = -2.71$, $p = .008$. Finally, in Step 5, I entered the cross-product of Pre-Post Change \times Networking Intensity \times Extraversion, estimate = -0.08; $SE = 0.03$, $t = -2.63$, $p = .005$, which was significant.

As before, I used online HLM calculators (Preacher et al., 2006) to conduct simple slope tests of the three-way interaction effect (see Figure 17 and Figure 18): When engaging in little networking behavior, neither introverts ($M - 1 SD$), estimate = 0.08, $SD = 0.06$, $z = 1.49$, $p = .137$, nor extraverts ($M + 1 SD$), estimate = 0.20, $SD = 0.17$, $z = 1.16$, $p = .246$, reported increased depletion. In contrast, when engaging in intense networking behavior, introverts reported significantly more depletion in the post-test, estimate = 0.34, $SD = 0.10$, $z = 3.25$, $p \leq .001$, whereas for extraverts, engaging in intense networking behavior had no effect on depletion, estimate = -0.03, $SD = 0.20$, $z = -0.18$, $p = .861$. Thus, extraversion buffered against the depleting effect of networking, thereby confirming Hypothesis 1c.

Table 23

Multilevel Estimates for Models Predicting Self-Rated Depletion, b

Variables	Model 0			Model 1			Model 2			Model 3		
	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>
Level 2 (Person) ^a												
Intercept	2.36	0.08	28.14***	2.36	0.08	28.49***	2.37	0.08	30.07***	2.37	0.08	30.07***
Networking				0.03	0.03	-1.20	-0.04	0.03	-1.41	-0.04	0.03	-1.41
Extraversion				-0.21	0.04	-4.96***	-0.20	0.04	-4.67***	-0.20	0.04	-4.67***
NW × Extra							-0.05	0.02	-2.71**	-0.05	0.02	-2.71**
Level 1 (Occasion) ^b												
Pre-post change ^c				0.13	0.09	1.36	0.13	0.09	1.37	0.15	0.09	1.58
Pre-Post × NW							0.01	0.05	0.29	0.00	0.04	0.08
Pre-Post × Extra							-0.08	0.08	-1.05	-0.06	0.07	-0.87
P-P × NW × Extra										-0.08	0.03	-2.63**
Deviance	656.51			628.62			622.68			617.08		
Variance component												
Occasion-level	0.26			0.25			0.25			0.24		
Person-level	0.23***			0.18***			0.18***			0.18***		
Event-level	0.06***			0.06***			0.05***			0.05***		

Note. ^a*N* = 162. ^b*N* = 324. ^cPre-post change (0 = Pre-test; 1 = Post-test).

[†] *p* ≤ .10. * *p* ≤ .05. ** *p* ≤ .01. *** *p* ≤ .001.

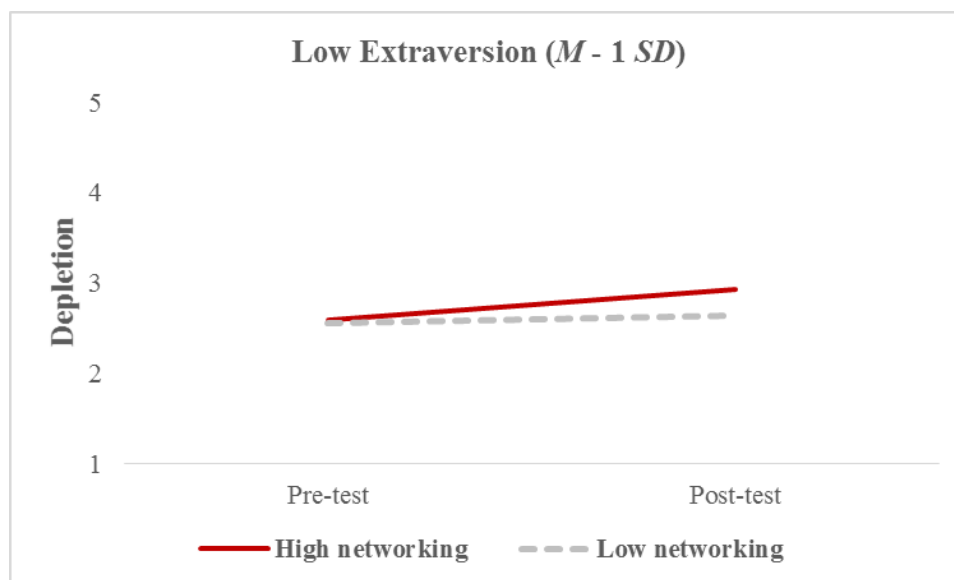


Figure 17. Simple slopes for the interaction between pre-post change and networking intensity on depletion for introverts.
Depletion: BMIS.

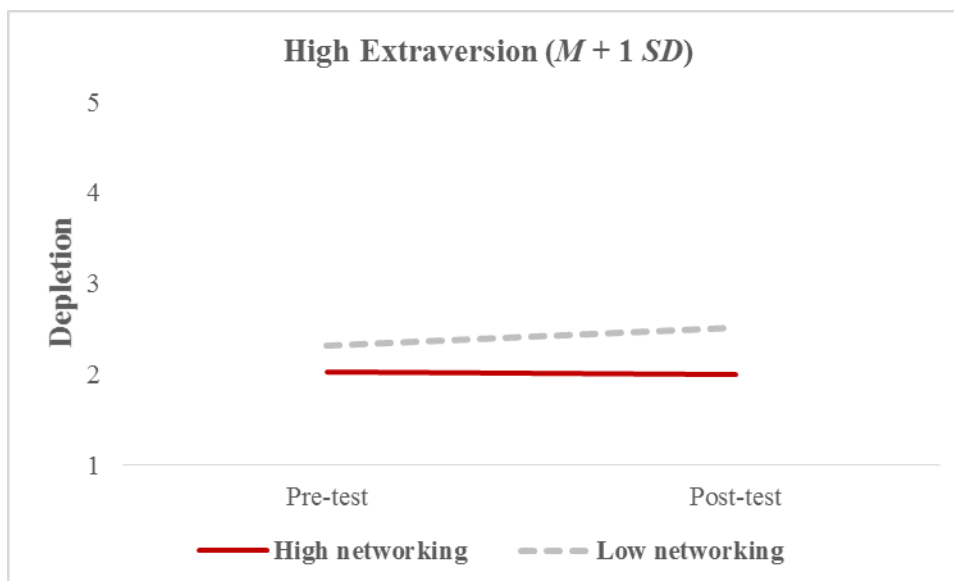


Figure 18. Simple slopes for the interaction between pre-post change and networking intensity on depletion for extraverts.
Depletion: BMIS.

Energy resource gain***Positive Affect***

Hypothesis 2a predicted that positive affect would increase from pre-test to post-test. In the null model, the intercept was the only predictor (see Table 24). In the second step, I entered pre-post change. Pre-post change was positively and significantly related to positive affect, estimate = 0.10; $SE = 0.02$, $t = 3.01$, $p = .002$, thus confirming Hypothesis 2a.

Hypothesis 2b predicted that networking intensity would moderate the increase in positive affect. In Model 2, I entered networking intensity, which had no significant main effect on self-control, estimate = 0.01; $SE = 0.83$, $t = 0.62$, $p = .534$. In the last step, I entered the cross-product of Pre-Post Change \times Networking Intensity, which, in contrast to the hypothesis, was not related to positive affect, estimate = -0.00; $SE = 0.02$, $t = -0.06$, $p = .951$. Thus, Hypothesis 2b was not supported.

Table 24

Multilevel Estimates for Models Predicting Positive Affect

Variables	Model 0			Model 1			Model 2			Model 3		
	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>
Level 2 (Person) ^a												
Intercept	3.25	0.06	50.95***	3.25	0.06	50.95***	3.25	0.06	50.95***	3.25	0.06	50.95***
Networking							0.01	0.02	0.62	0.01	0.02	0.62
Level 1 (Occasion) ^b												
Pre-post change ^c				0.10	0.03	3.01**	0.10	0.03	3.01**	0.10	0.03	3.01**
Pre-Post × NW										-0.00	0.02	-0.06
Deviance	515.96			508.96			508.77			508.77		
Variance component												
Occasion-level	0.11			0.10			0.10			0.10		
Person-level	0.31***			0.32***			0.32***			0.32***		
Event-level	0.02*			0.02*			0.02*			0.02*		

Note. ^a*N* = 162. ^b*N* = 324. ^cPre-post change (0 = Pre-test; 1 = Post-test).

p* ≤ .05. *p* ≤ .01. ****p* ≤ .001

Discussion

In Study 3, I sought to replicate results from the two laboratory experiments in the field at real networking events. As in Studies 1 and 2, I investigated the dark side of networking behavior. That is, energy resource drain through networking behavior (i.e., self-control depletion) as well as a buffering effect of extraversion. Further, as in Study 2, I also integrated the bright side of networking, referring to the energy resource gain process, as manifested by positive affect. Therefore, I performed a field study with 162 attendees of multiple networking events.

On the dark side, I found that networking behavior depletes self-control resources. More specifically, participants showed significant decreases in handgrip performance (as a measure of self-control) after participating in a networking event. Also, they reported marginally more depletion after attending a networking event. However, contrasting expectations, I found no moderating effect of networking intensity for the depleting effect of attending a networking event. Hence, depletion following the event did not depend on time spent networking and the number of networking interactions at the event. Yet, as predicted by the developed model of networking behavior (cf. Figure 3) and in line with findings from Study 1, extraversion moderated the depleting effect of networking intensity when attending a networking event. That is, when engaging in intense networking at the event, introverts' handgrip performance worsened and they reported more depletion in the post-test. In contrast, intense networking had no such detrimental effect on extraverts.

On the bright side, I found further support for energy resource gain following networking behavior. Findings suggest that attending a networking event enhances energy resources, as manifested by positive affect. However, contrary to expectations, the positive effect on mood resources was not moderated by networking intensity. Hence, participants did not experience more

positive affect when they had spent more time networking and interacted with more networking contacts at the event.

Networking events are planned meetings with the proximal objective of building, maintaining, and using interpersonal relationships (cf. Bergemann et al., 2017; Ingram & Morris, 2007). Therefore, in order to gain a deeper understanding of networking behavior and its consequences, it seems promising to collect data at networking events. Furthermore, replicating findings with a working sample strengthens external validity. I used a broad sample with participants from different occupational backgrounds. Prior networking studies typically focus on either employees (e.g., Wolff & Moser, 2009), entrepreneurs (e.g., Ostgaard & Birley, 1996), job seekers (e.g., Wanberg et al., 2000), or students (Schütte & Blickle, 2015), whereas I included all of them. Yet, controlling for the respective status did not substantively change results, thus arguing for generalizability of the findings. Nonetheless, interpretations should be handled with care, given the small sample size of the subgroups (particularly job-seekers, $N = 9$, and students, $N = 30$). The same applies to the event level. By including twelve events, I followed Shadish et al.'s (2002) recommendation to use a sample of many possible versions of the examined situation. However, the sample size of twelve events is still too small to examine event-level effects (cf. Ohly, Sonnentag, & Niessen, 2010; Snijders, 2005).

Despite the distinct strengths of the present study, I recognize several limitations. First, the within-person design with repeated measures yields potential threats to internal validity, for example, fatigue or practice effects (cf. Shadish et al., 2002). However, I built my hypotheses on theory as well as empirical findings from experimental laboratory studies that are characterized by high internal validity. Furthermore, in Study 3, I relied on well-established measures that have been typically measured twice in a pre-test and post-test in prior studies (e.g., Martijn et al., 2007).

Also, I did not rely on mere changes from pre-test to post-test, but rather examined quite complex moderator effects, including a three-way Interaction of pre-post change, networking intensity, and extraversion. As outlined above, Shadish and colleagues (2002) state that the use of predicted interactions makes internal validity threats less plausible.

Second, I used no random sample, but participants who I encountered at networking events. The tendency to participate in a networking event, however, might be influenced by personal characteristics. If only certain types of people chose to attend networking events, results might reflect those group tendencies (self-selection bias). Supporting this notion, with regard to extraversion, the sample in Study 3 had a significantly higher mean ($M = 3.63$, $SD = 0.56$) than the sample in Study 1 ($M = 3.35$, $SD = 0.56$), $t(366) = 4.81$, $p \leq .001$. This fits in with the characterization of extraverts as actively seeking out social interactions with professional contacts (cf. Forret & Dougherty, 2001). However, that makes results from Study 3 even more pivotal as they also apply to individuals who deliberately pursued the networking situation. Also, it is noteworthy that I still found a moderating effect of extraversion.

Lastly, even though in Study 3, I gathered data in a natural setting, a networking event seems to be a rather particular situation. Therefore, networking behaviors should also be studied in employees' everyday working life. Therefore, in Study 4, I seek to investigate employees' networking behavior in their natural work context.

Study 4

In Studies 1 – 3, I established energy resource drain and energy resource gain processes through networking behavior. On the dark side, I found that networking behavior depletes self-regulatory energy resources. On the bright side, I found that networking behavior generates affective energy resources. Taken together, Studies 1 – 3 suggest that networking behavior simultaneously depletes and generates energy resources.

Whereas the experimental designs used in Studies 1 and 2 provide high internal validity, replicating results in real networking situations (Study 3) strengthens external validity. Yet, because a networking event still is a rather particular situation, in Study 4, I seek to investigate how networking behavior affects employees in their everyday working life. Although people's networking behavior appears to be relatively stable when aggregated over time (e.g., Meier & O'Toole, 2005), as for other proactive behaviors at work (e.g., Sonnentag & Starzyk, 2015), there might be considerable within-person variability. Therefore, I argue that networking behavior varies from day to day and even those who rarely show networking behaviors do so at times and should experience its consequences.

The proposed model (cf. Figure 3; see also Hobfoll, 2002; ten Brummelhuis & Bakker, 2012) suggests that people's networking behavior not only yields immediate energy resource drain and gain, but also leads to attitudinal and productive outcomes over the course of a day. Therefore, in Study 4, I take a step forward and integrate day-level outcomes of networking behavior. For example, networking behavior at work might likely have an impact on employees' work-related well-being (e.g., emotional exhaustion), not only at work but also after finishing work. In order to assess the relationship between employees' networking behavior at work with outcomes at work as well as after work, I extended the investigated time frame. That is, I measured outcomes of

networking behavior twice, after work and before bedtime. More specifically, I conducted a daily diary study with 166 employees, completing two online surveys per day over the course of one working week.

Hypotheses

Figure 19 depicts an overview of the hypotheses in Study 4.

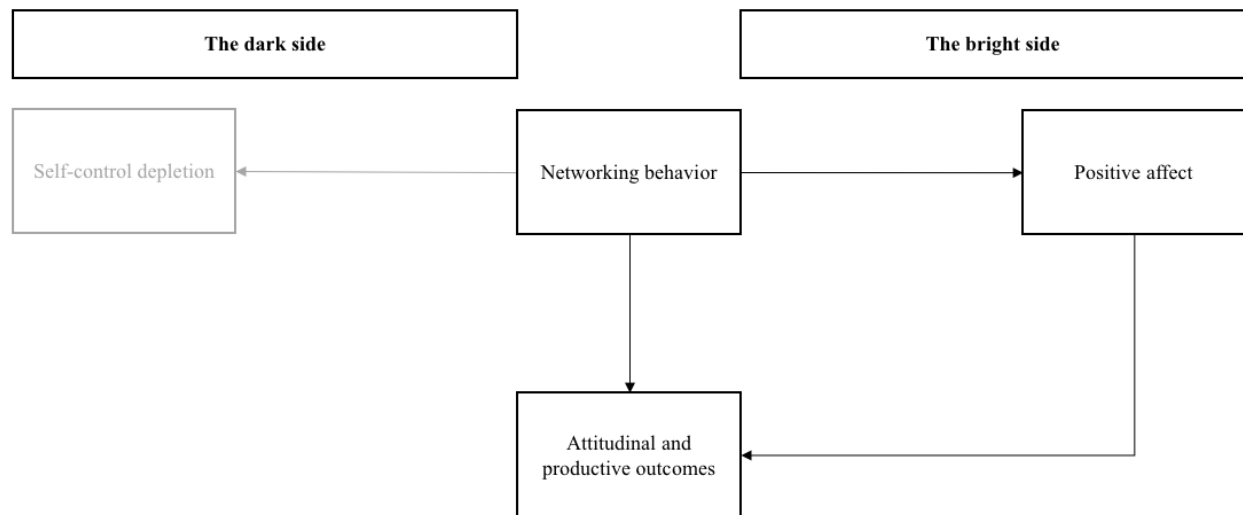


Figure 19. Overview of hypotheses in Study 4.

Energy resource drain

According to the energy resource drain process, networking behavior depletes self-regulatory energy resources. In Studies 1 – 3, I found support for the proposed energy resource drain process. That is, networking behavior depletes self-control resources, as manifested by increased candy consumption (Studies 1 and 2) and decreased handgrip performance (Study 3) following networking. With regard to self-report measures, Study 3 showed that networking

behavior increases depletion whereas findings of Studies 1 and 2 contradicted hypotheses. As discussed, the unexpected findings in Studies 1 and 2 might be due to the relatively long period in between the networking manipulation and the measurement of self-reported self-control (see Discussion of Study 1; see also Tyler & Burns, 2008). In the present study, the period in between the exertion of networking behavior (e.g., at lunch) and the assessment of self-control (i.e., after work) might be even longer. Furthermore, the study design does not allow for assessing self-control depletion with a behavioral self-control measure. Therefore, I do not specify any hypotheses regarding self-control depletion. However, I briefly report results regarding self-control depletion.

Energy resource gain

According to the proposed energy resource gain process, networking behavior generates energy resources in the form of enhanced positive affect. This is in line with COR theory, suggesting that people anticipate the strategic resource investments they make in networking behavior to pay off (Hobfoll, 2001). Accordingly, Ingram and Morris (2007) state that attendees of networking event expect to receive return on their investments. Hence, engaging in networking behavior should result in immediate or anticipated resource gain (e.g., forming a new networking relationship or obtaining strategic information). Actual or anticipated resource gain during networking should also be manifested by augmented affective energy resource states (cf. Halbesleben et al., 2014; ten Brummelhuis & Bakker, 2012). In line with this arguing, in Studies 2 and 3, I found that networking behavior improves positive affect. Therefore, tying in with findings from Studies 2 and 3, I seek to replicate the finding that networking behavior positively

relates to positive affect. More specifically, I assume that on work days characterized by high levels of networking behavior, employees should experience more positive affect after work.

Hypothesis 1: Day-level networking behavior is positively related to day-level positive affect.

Attitudinal outcomes

Given that networking behavior results in short-term energy resource drain and gain, a crucial question is how networking behavior and energy resource processes influence further outcomes over the course of a day (cf. Figure 3 and Figure 19). Attitudinal outcomes refer to feelings and beliefs that are valued by the employee and the employer (ten Brummelhuis & Bakker, 2012). Examples of attitudinal outcomes are feelings of work-home conflict and work-related well-being.

Feelings of work-life⁴⁰ conflict

The work–life literature is dominated by resource-theoretical approaches (Wiese, 2007) such as models based on role theory (e.g., Greenhaus & Beutell, 1985; Pleck, 1977). The basic notion of these models is that employees have limited resources such as time and energy for fulfilling roles. Work–life conflict occurs when resource investments in one domain drain resource reservoirs, leaving insufficient resources to function optimally in the other domain (ten Brummelhuis & Bakker, 2012). According to the proposed model of networking behavior (cf.

⁴⁰ I refer to the “life” instead of the “family” domain because the former label is not limited to the family, but embraces the various life roles employees might possess beyond their work roles (cf. Greenhaus & Powell, 2006).

Figure 3 and Figure 19), employees must invest self-regulatory energy resources when engaging in networking behaviors at work, resulting in self-control depletion (see also Studies 1 – 3). As a consequence, employees who have invested their self-control resources into networking behavior at work might be too depleted to maintain private relationships or participate in family life after finishing work. They might therefore experience feelings of work-life conflict. In a similar vein, Wolff et al. (2008) argue that a strong focus on work-related contacts might go along with a neglect of friends and family and, consequently, cause work-life conflicts. Therefore, I assume that higher levels of networking behavior at work should lead to increased feelings of work-life conflict on a daily basis.

Hypothesis 2: Day-level networking behavior is positively related to day-level feelings of work-life conflict.

Work-related well-being

Well-being is commonly viewed as people's subjective and emotional assessments of important aspects of their lives (Diener, 1984),⁴¹ for example, their work (work-related well-being, ten Brummelhuis & Bakker, 2012). In general, COR theory has a strong focus on linking resource changes to well-being (cf. Halbesleben et al., 2014; Hobfoll, 2002; ten Brummelhuis & Bakker, 2012). Perceived or actual resource loss has been found to result in burnout (e.g., Lee & Ashforth, 1996), whereas (perceived) resource gains improve well-being (Diener et al., 1999). For example, a resource deficit finds expression in emotional exhaustion, whereas resource gain is reflected by

⁴¹ This broad definition by Diener (1984; see also Diener et al., 2017) also encompasses emotional assessments such as positive affect. However, based on COR's resource typology, I consider positive affect an energy resource whereas indicators of work-related well-being such as work satisfaction, emotional exhaustion, and work engagement represent attitudinal outcomes (cf. ten Brummelhuis and Bakker, 2012).

work engagement as the “positive antipode of burnout” (Gorgievski & Hobfoll, 2008, p. 8). In this vein, a recent strategy to measure resource changes has been to use well-being as an indicator that there has been a change in resources (cf. Halbesleben et al., 2014). Research on intra-individual well-being finds that employees are sensitive to changes in resources that can occur over relatively short timeframes such as over workdays or weekends (e.g., Halbesleben & Wheeler, 2015; Binnewies et al., 2010; Fritz & Sonnentag, 2005). Building on this, I argue that networking behavior should improve people’s subjective work-related well-being on a daily basis. That is, networking behavior is a means to generate resources, either immediately (e.g., networking relationships, strategic information) or in the future (e.g., job search or career success, cf. Gibson et al., 2014). Those resources, in turn, might “facilitate well-being indirectly by allowing individuals to pursue and attain important goals” (Diener et al., 1999, p. 284). I consider three indicators of work-related well-being: work satisfaction, emotional exhaustion, and work engagement.

Work satisfaction

Work satisfaction is the most commonly examined indicator of work-related well-being (cf. Diener et al., 1999; Ilies et al., 2007). It reflects an evaluative state resulting from a positive “appraisal of one’s job or job experiences” (Locke, 1976, p. 1300), for example, with regard to evaluations of the social environment at work (Koopman et al., 2016).⁴² Work-related resources such as instrumental support increase work satisfaction (e.g., Raby, 2010). As networking behavior

⁴² Thus, satisfaction is mostly treated as an attitude concept in survey studies (e.g., Warr, Cook, & Wall, 1979). However, in diary studies work satisfaction can also be considered an affective response to one’s job (e.g., Fisher, 2000; cf. Ohly et al., 2010).

is a means to generate such work-related resources (cf. Gibson et al., 2014), I argue that higher levels of networking behavior should be related to increased work satisfaction on a daily basis.

Hypothesis 3a: Day-level networking behavior is positively related to day-level work satisfaction.

The proposed model of networking behavior (cf. Figure 3 and Figure 19) suggests that engaging in networking behavior should result in positive affect (see also Studies 2 and 3), which, in turn, has an impact on attitudinal outcomes such as work satisfaction. This is in line with research on mood congruence, arguing that the valence of experienced emotions (e.g., positive affect) influences the valence of retrieved evaluations (e.g., work satisfaction; cf. Bower, 1981; Forgas, 1995). Accordingly, meta-analytical research shows a significant relationship between positive affect and work satisfaction ($p = .34$, Thoresen, Kaplan, Barsky, Warren, & Chermont, 2003). Also, Koopman and colleagues (2016) find that employees' positive affect mediates the effect of interpersonal OCB on work satisfaction (see also Dimotakis, Scott, & Koopman, 2011; Judge & Ilies, 2004). Therefore, I propose a mediating effect of positive affect for the relationship between networking behavior and work satisfaction.

Hypothesis 3b: Day-level positive affect mediates the relationship between day-level networking behavior and day-level work satisfaction.

Emotional exhaustion

Emotional exhaustion is “an important marker of employee well-being” (Halbesleben & Wheeler, 2011, p. 608). It represents the central strain dimension (Maslach & Leiter, 2008) and key component of burnout (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Halbesleben & Bowler, 2007). According to COR, resource gain should reduce emotional exhaustion (cf.

Halbesleben et al., 2014). Accordingly, meta-analytical research (Halbesleben, 2006) as well as several studies (e.g., Baeriswyl, Krause, Elfering, & Berset, 2017; Ducharme, Knudsen, & Roman, 2008; Hobfoll & Freedy, 1993; Ortiz-Bonnín, García-Buades, Caballer, & Zapf, 2016) confirm that work-related resources such as instrumental support at work are negatively related to emotional exhaustion. Networking behavior is a means to generate professional resources (cf. Gibson et al., 2014). Hence, employees might draw upon networking behavior to accumulate work-related resources in order to address exhaustion. Therefore, I argue that networking behavior at work decreases emotional exhaustion on a daily basis.

Hypothesis 4a: Day-level networking behavior is positively related to day-level emotional exhaustion.

As suggested by the developed model of networking behavior (cf. Figure 3 and Figure 19), networking behavior leads to improved affect (see Studies 2 and 3), which can “undo” negative states, inherent to emotional exhaustion (Fredrickson, 1998; Fredrickson & Levenson, 1998, Tice, Baumeister, Shmueli, & Muraven, 2007). Accordingly, a meta-analysis showed a significant, negative relationship between positive affect and emotional exhaustion ($\rho = -.32$, Thoresen et al., 2003). Building on this arguing, improved affect following networking behavior should reduce emotional exhaustion (cf. ten Brummelhuis & Bakker, 2012). In line with COR and proposed model of networking behavior, I suggest that part of the relationship between networking behavior and emotional exhaustion can be explained by the affective boost following networking.

Hypothesis 4b: Day-level positive affect mediates the relationship between day-level networking behavior and day-level emotional exhaustion.

Work engagement

Contrasting emotional exhaustion, work engagement is considered the positive antipode of burnout (Schaufeli, Bakker, & Salanova, 2006), representing a state of excess resources (Gorgievski & Hobfoll, 2008). It is defined as a “positive, fulfilling work-related state of mind that is characterized by vigor, dedication, and absorption” (Schaufeli & Bakker, 2004, p. 295). Vigor is characterized by high levels of energy while working and the willingness to invest effort in one’s work. Dedication refers to being strongly involved in one’s work and experiencing a sense of enthusiasm and challenge. Finally, absorption is characterized by being fully concentrated in one’s work (Schaufeli & Bakker, 2004). Work engagement generally shows positive relationships with work-related resources such as instrumental support (e.g., Albrecht, 2010; Bakker, 2011; Bakker & Demerouti, 2008; Schaufeli & Bakker, 2004; Schaufeli, Bakker, & Van Rhenen; 2009). As networking behavior provides access to work-related resources (cf. Gibson et al., 2014) it should be positively related to work engagement. Indeed, a recent diary study found that networking behavior was positively associated with work engagement on a daily basis (Dubbelt, Rispens, & Demerouti, 2016). Likewise, I hypothesize that networking behavior relates to work engagement.⁴³

Hypothesis 5: Day-level networking behavior is positively related to day-level work engagement.

⁴³ Because I measured networking behavior, positive affect, and work engagement concurrently after work, I could not test a mediating effect of positive affect on the relationship between networking behavior and work engagement. However, in line with COR, it seems likely that, as for work satisfaction and emotional exhaustion, the effect of networking behavior on work engagement is mediated by positive affect following networking behavior.

Productive outcomes

Furthermore, the proposed model of networking behavior suggests that networking behavior influences productive outcomes (cf. Figure 3 and Figure 19). Productive outcomes refer to the efficient and effective creation of products and services (ten Brummelhuis & Bakker, 2012). One such productive outcome is work performance.

Work performance

Work performance is defined as behaviors relevant to the goals of an organization, with task performance directly relating to the organization's technical core (McCloy et al., 1994). Studies suggest that an individuals' performance at work varies from day to day (e.g., Bakker, 2011), depending on the level of work-related resources (e.g., Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Accordingly, previous studies show that networking behavior as a means to generate work-related resources is positively associated with task performance (e.g., Blickle et al., 2012; Nesheim et al., 2017; Shi et al., 2011; Thompson, 2005; cf. work performance). This might be due to several mechanisms, such as "acquiring and having trustworthy sources of information, identifying and communicating with potential customers, creating solutions to problems that have a high degree of uniqueness and require input from several contributors, as well as influencing decision outcomes at both the operative and strategic level" (Nesheim et al., 2017, p. 242). Accordingly, I propose a positive relationship between networking behavior and task performance on a daily basis.

Hypothesis 6: Day-level networking behavior is positively related to day-level work performance.

Method

I used a daily diary study design. Upon registration, participants filled out a general background survey. Starting the following Monday, they completed two daily online surveys (after work and before bedtime) over the course of a working week.

Participants

I recruited study participants via university and company mailing lists as well as in various Facebook groups throughout Germany. Participants were required to have secondary education and to be employed for a minimum of 19 paid working hours per week. Participation was motivated by promising feedback about study findings and raffling lottery prizes (iPad, Amazon vouchers). Lottery prizes were not contingent on participants' compliance (e.g., one lot per daily survey completed) as scholars warn that this might motivate participants to fake responses (e.g., Green, Rafaeli, Bolger, Shrout, & Reis, 2006).

A total of 180 employees agreed to participate in the study. Five participants had to be excluded from the analyses because they did not complete the full background survey. Nine participants were excluded because they did not respond to a single daily survey. Thus, the final sample consisted of 166 employees (92.2% of the original sample). Due to the recruitment strategy, I have no information on the number of individuals who initially received the request to participate.

Out of the final sample, 109 participants were female (65.7%) and 57 (34.3%) were male (see Table 27). The average age was 30.28 years ($SD = 5.49$). Regarding education, 12.0% had secondary education, 9.6% held a bachelor's degree and 65.7% held a master's degree; 12.7% indicated to have a PhD. The average tenure was 3.20 years ($SD = 3.31$) and 22.9 % held a supervisor position.

More than half of the sample worked in academia (55.8%), the remaining participants worked across a wide range of industries (see Table 25). As academics are clearly overrepresented in the sample, I repeated all analyses separately for academics ($N = 92$) and non-academics ($N = 74$). In both samples, all parameters showed the same tendencies and the differences between the full and the constituent samples topped out at one position after the decimal point. Due to the smaller sample sizes, some results did not reach significance in the constituent samples. However, because I found no major or systematic differences between the full and the constituent samples, I report results for the full sample only.

Table 25

Participants' Professional Sectors

Professional sector	Frequency	Percent
Academia	92	55.8%
Health Care and Welfare	16	9.6%
Education	9	5.4%
Building Industry	7	4.2%
Information and Communication Technology	6	3.6%
Automotive	4	2.4%
Finance and Insurance	3	1.8%
Energy Supply	2	1.2%
Logistics	1	0.6%
Other	25	15.1%
Missing	1	0.6%

From the 1660 daily surveys sent out, participants responded to 1279 surveys (699 after work, 580 at bedtime), indicating an overall response rate of 77.1%. As displayed in Table 26, in general, the after work survey ($M = 84.2\%$, $SD = 5.4$) had a better response rate than the nightly survey ($M = 69.9\%$, $SD = 9.9$).

Table 26

Response Rates

Day	After work	At bedtime
1	88.6%	77.7%
2	85.5%	69.3%
3	88.0%	75.3%
4	83.7%	74.1%
5	75.3%	53.0%

Procedure

All data was collected online and via self-report. After participants registered, they read and agreed to an informed consent and filled out a general background survey. Starting the following Monday, participants completed two daily brief online surveys over five consecutive working days (see Figure 20). Participants were instructed to answer the daily survey (sent out at 4.30 pm) after they finished work and to respond to the nightly survey (sent out at 9 pm) right before they went to bed. Responding was possible during a specified time frame of five hours.

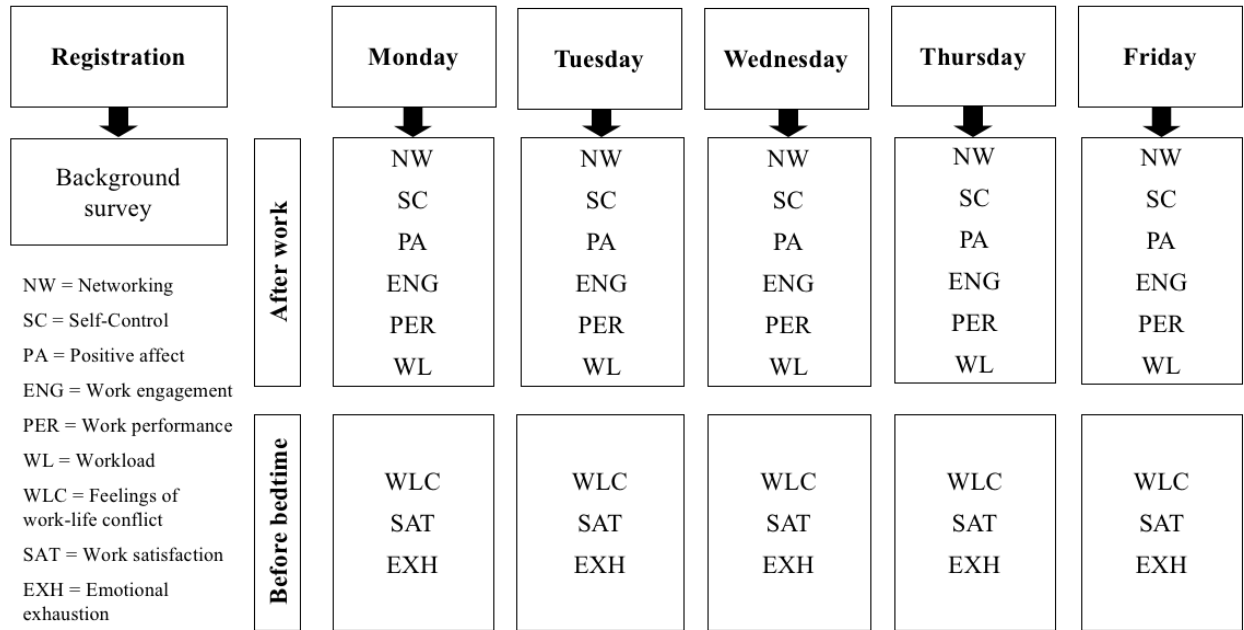


Figure 20. Diary study design.

Measures

General background survey

Networking behavior

In order to evaluate the validity of the day-level networking measure, I assessed employees' general person-level networking behavior in the background survey. I used a shortened twelve-item version of Wolff and colleague's (2017) brief 18-item networking scale (based on the original 44-item scale, Wolff & Moser, 2006; Appendix L). Sample items are "In my company, I approach employees I know by sight and start a conversation", "I discuss problems with colleagues from other departments that they are having with their work", and "I exchange professional tips and hints with acquaintances from other organizations". Participants used a 5-point Likert scale (1 = *never* to 5 = *very often/always*), $\alpha = .86$.

Demographic variables

Participants specified their gender, age, education, and tenure. Furthermore, they indicated their professional sector and whether they held a supervisor position. I repeated all analyses, controlling for demographic variables, but results were essentially identical. Therefore, as recommended by Becker (2005), I report the findings without controlling for demographic variables (see Study 1 for more details on dealing with control variables).

*Daily after work survey**Networking behavior*

I measured day-level networking behavior with five items based on Wolff and Moser's (2006) networking scale (Appendix M). I used more general items because the original items are very specific and might thus produce floor effects on the daily level. Sample items for day-level networking behavior are "Today at work, I built new contacts", "Today at work, I maintained my informal contacts", and "Today at work, I approached my informal contacts to request support". Participants used a 6-point Likert scale, ranging from 1 (*not at all*) to 6 (*very much*). Cronbach's alphas ranged from .74 to .91 over the five days (mean $\alpha = .84$). In order to evaluate the validity of the day-level networking measure, I assessed the relationship between person-level networking and day-level networking behavior. Using HLM, I entered person-level networking into the model predicting day-level networking. I found the expected significant, positive relationship between the two measures, estimate = 0.40, $SE = 0.10$, $t = 3.85$, $p \leq .001$.

Self-Control

I assessed self-control with the brief ten-item German version of the State Self-Control Capacity Scale (Bertrams et al., 2011; Appendix C; see also Studies 1 and 2).⁴⁴ Cronbach's Alphas ranged between .84 and .90 from Day 1 to 5 (mean $\alpha = .88$).

Positive affect

I measured positive affect with ten items from the PANAS (German version: Krohne et al., 1996; Appendix H; see also Study 2). Sample items include “active”, “determined”, and “proud”. Participants indicated to what extent they felt this way at the present moment on a 5-point Likert scale (1 = *not at all* to 5 = *extremely*). Cronbach's Alphas varied from .81 to .91 over the five days (mean $\alpha = .87$).

Work engagement

Work engagement was assessed with the short nine-item version of the Utrecht Work Engagement Scale (UWES-9, Schaufeli et al., 2006; Appendix N). Sample items are “Today at work, I felt bursting with energy”, “Today, I was enthusiastic about my work”, and “Today, I immersed in my work”. The items were scored on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach's alphas for work engagement ranged from .92 to .94 over the five days (mean $\alpha = .93$).

⁴⁴ Note that I conducted Studies 3 and 4 in reverse order and changed the self-report measure in Study 3.

Work performance

I measured work performance with five items of the subscale “Task Performance”, derived from the Work Performance Behavior Questionnaire (Staufenbiel & Hartz, 2000; Appendix O). Sample items include “Today at work, I fulfilled my obligations”, “Today at work, I met my performance requirements”, and “Today at work, I neglected my responsibilities” (reversed). Participants answered on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach’s Alpha varied between .85 and .89 over the five days (mean $\alpha = .87$).

Workload

I controlled for workload because it might affect networking behavior as well as other criteria. For example, on work intense days, individuals might have no time or energy to network and might be emotionally exhausted (e.g., Garrick et al., 2014; Luong & Rogelberg, 2005). I measured workload with five items from the Work Intensity Questionnaire (Richter et al., 2000). Sample items include “Today, I had a lot of work to do”, “Today at work, I felt a lot of time pressure”, and “Today, my pace of work was very fast”. Participants answered on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach’s alphas of workload varied between .73 and .81 from Day 1 to 5 (mean $\alpha = .77$). I conducted all analyses both with and without workload. However, because results were essentially identical, I report results without controlling for workload.

Daily bedtime survey

Feelings of work-life conflict

I measured feelings of work-life conflict with four items of the subscale “strain-based work-family conflict”, derived from the Work-Family Conflict Scale by Stephens and Sommer (1996; Appendix P). Sample items are “Today, I felt the strain of attempting to balance my work and private life responsibilities”, “Today, I felt irritable in my private life because my work was so demanding”, and “Today, the demands of my job made it difficult for me to maintain the kind of private relationships that I would have liked”. Participants used a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach’s alpha ranged between .82 and .87 over the five days (mean $\alpha = .87$).

Work satisfaction

I used a series of five faces showing feelings from very negative (1 = *totally dissatisfied*) to very positive (5 = *totally satisfied*) to assess momentarily work satisfaction (Kunin, 1955; Appendix Q). Studies showed that single-item scales are an adequate measure of overall work satisfaction (e.g., Ironson, Smith, Brannick, Gibson, & Paul, 1989; Kaplan, Warren, Barsky, & Thoresen, 2009; Wanous, Reichers, & Hudy, 1997).

Emotional exhaustion

Emotional exhaustion was measured with eight items from the Oldenburg Burnout Inventory (OLBI, Demerouti, Bakker, Vardakou, & Kantas, 2003; Appendix R). Sample items include “Today after work, I felt worn out and weary”, “Today after work, I needed more time than usual to relax and feel better”, and “Today after work, I felt fit for my leisure activities”

(reversed). Participants indicated their agreement on a 5-point Likert-scales (1 = *strongly disagree* to 5 = *strongly agree*). Cronbach's Alpha ranged from .82. to .87 over the five days (mean α = .85).

Analyses

I analyzed the data with a multilevel random coefficient model using HLM (Version 7, Raudenbush et al., 2011), thereby accommodating the two-level data structure with days nested within persons. In order to test whether HLM is appropriate to analyze the data, I examined the day-level (within-person) and person-level (between-person) variance of all day-level study variables (cf. Tables 29 – 34). For networking behavior, 62.98% of the overall variance explained was at the day-level, suggesting that even though scholars depict networking as a rather stable behavior syndrome (e.g., Meier & O'Toole, 2005), there is substantive within-person variation at the day-level. For self-control, 57.95% and for positive affect, 55.07% of the overall variance explained was at the day-level. For feelings of work-life conflict, 50.18% of the overall variance was at the day-level. For work satisfaction, 37.05%, and for emotional exhaustion, 46.68% of the overall variance explained was at the day-level. For work engagement, 40.40%, and for work performance, 57.21%, of the overall variance explained was at the day-level. Regarding workload, the day-level variance was 54.39%. All variance components are within the range labelled as substantial by other scholars (e.g., Ilies et al., 2007: variances between 21% and 71%). Thus, a substantive portion of the overall variance explained in networking as well as in all dependent variables of the present study was due to variance at the day-level, suggesting that a multilevel approach is most appropriate for examining the research questions.

As recommended by Enders and Tofighi (2007), all within-person predictors were centered at the respective person mean. All hypotheses were tested in a one-tailed way (cf. Cho & Abe, 2013). I entered the variables into the models in the following three steps:

Step 1 (Model 0). In the first step, the intercept was the only predictor.

Step 2 (Model 1). In Step 2, I entered day-level networking behavior.

Step 3 (Model 2). In the last step, I entered positive affect as a mediator of the relationship between networking and the respective criterion (work satisfaction or emotional exhaustion).

Results

Table 27 displays the descriptive statistics, correlations, and reliabilities of the person-level variables.

Table 27

Descriptive Statistics, Reliabilities, and Correlations between Person-Level Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1 Networking	3.12	0.60	(.86)						
2 Gender ^a	0.34	0.48	.04						
3 Age	30.28	5.49	.02	.20**					
4 Education ^b	2.79	0.82	-.07	-.05	.17*				
5 Tenure	3.20	3.31	.17*	.16*	.51***	.05			
6 Supervisor ^c	0.23	0.42	.03	.27***	.32***	.12	.30***		
7 Academia ^d	0.55	0.50	-.09	.09	-.07	.51***	-.02	.06	

Note. *N* = 166. Cronbach's alpha listed on the diagonal.

^aGender (0 = female, 1 = male). ^bEducation (1 = secondary education, 2 = bachelor's degree, 3 = master's degree, 4 = PhD). ^cLeadership (0 = no; 1 = yes). ^dAcademia (0 = no; 1 = yes).

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Table 28 displays the descriptive statistics, correlations, and reliabilities of the day-level variables.⁴⁵

⁴⁵ As recommended by Becker (2005), I report descriptive statistics for workload, even though I did not include workload as a control variable, because results are essentially identical with and without controlling for workload.

Table 28

Descriptive Statistics, Reliabilities, and Correlations between Day-Level Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1 Networking	2.37	1.13	(.84)								
2 Self-Control	3.43	0.66	.01	(.88)							
3 Positive affect	2.57	1.13	.18***	.66***	(.87)						
4 Work-Life Conflict	2.06	0.87	.06	-.44***	-.27***	(.87)					
5 Work satisfaction	3.69	1.00	.14**	.32***	.29***	-.33***					
6 Emotional exhaustion	2.52	0.76	-.10*	-.66***	-.54**	.61***	-.45***	(.85)			
7 Work engagement	2.95	0.77	.25***	.41***	.48***	-.18***	.64***	-.50***	(.93)		
8 Work Performance	3.81	0.77	.12**	.33***	.20***	-.18***	.28***	-.32***	.42***	(.87)	
9 Workload	2.80	0.87	.06	-.25***	-.10**	.45***	-.07	.38***	.01	-.05	(.77)

Note. $N=512-699$. Cronbach's alphas listed on the diagonal.

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Energy resource drain

Self-control depletion

Even though, I did not specify any hypotheses regarding self-control, I briefly report results. In the null model, the intercept was the only predictor. In Step 2, I entered day-level networking behavior, revealing that networking behavior was not related to day-level self-control, estimate = 0.02; $SE = 0.03$, $t = 0.76$, $p = .448$ (Appendix S).

Energy resource gain

Positive affect

Hypothesis 1 predicted that day-level networking behavior would be positively related to day-level positive affect after work. In the null model, the intercept was the only predictor (see Table 29). In Model 1, I entered networking, revealing a positive relationship of networking behavior and positive affect, estimate = 0.08, $SE = 0.03$, $t = 2.61$, $p = .005$. Thus, I found support for Hypothesis 1.

Table 29

Multilevel Estimates for Models Predicting Day-Level Positive Affect

Variable	Model 0			Model 1		
	Est.	SE	T	Est.	SE	t
Intercept	2.58	0.04	58.13***	2.58	0.04	58.12***
Networking				0.08	0.03	2.61**
Deviance	1396.04			1391.08		
Level 1 Intercept	0.30			0.30		
Level 2 Intercept	0.25***			0.25***		

Note. Level 1: $N = 699$. Level 2: $N = 165$.** $p \leq .01$. *** $p \leq .001$.**Attitudinal outcomes*****Feelings of work-life conflict***

Hypothesis 2 predicted that employee networking behavior would be positively related to feelings of work-life conflict on a daily basis. In the null model, the intercept was the only predictor (see Table 30). In Model 1, I entered networking, revealing a marginally significant, positive relationship of networking behavior and feelings of work-life conflict, estimate = 0.07, $SE = 0.05$, $t = 1.50$, $p = .067$. Hence, I found limited support for Hypothesis 2.

Table 30

Multilevel Estimates for Models Predicting Day-Level Feelings of Work-Life Conflict

Variable	Model 0			Model 1		
	Est.	SE	T	Est.	SE	t
Intercept	2.08	0.06	36.99***	2.08	0.06	36.66***
Networking				0.07	0.05	1.50 [†]
Deviance	1329.57			1265.53		
Level 1 Intercept	0.38			0.39		
Level 2 Intercept	0.38***			0.37***		

Note. Level 1: $N = 546$. Level 2: $N = 154$.[†] $p \leq .10$. *** $p \leq .001$.***Work satisfaction***

Hypothesis 3a predicted that networking behavior would be positively related to work satisfaction on a daily basis. In Model 0, the intercept was the only predictor (see Table 31). In Model 1, I entered networking, revealing a positive relationship between networking behavior and work satisfaction, estimate = 0.09, $SE = 0.04$, $t = 2.48$, $p = .007$. Thus, results supported Hypothesis 3a.

Hypothesis 3b predicted that the relationship between networking behavior and work satisfaction would be mediated by positive affect. I tested the mediating effect of positive affect following the procedure suggested by Preacher & Hayes (2004). Therefore, in Model 2, I entered positive affect (Table 31). Model 2 showed a positive relationship of positive affect and work satisfaction, estimate = 0.25, $SE = 0.06$, $t = 3.83$, $p \leq .001$, as well as a positive relationship of networking and work satisfaction, estimate = 0.08, $SE = 0.03$, $t = 2.28$, $p = .012$. Thus, Hypothesis 3a received support, as positive affect partially mediated the relationship between networking and

work satisfaction. Notably, networking behavior had an effect on work satisfaction, which was over and beyond positive affect.

Table 31

Multilevel Estimates for Models Predicting Day-Level Work Satisfaction

Variable	Model 0			Model 1			Model 2		
	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>
Intercept	3.66	0.07	52.07***	3.64	0.07	51.18***	3.64	0.07	51.17***
Networking				0.09	0.04	2.48**	0.08	0.03	2.28**
Positive Affect							0.25	0.06	3.83***
Deviance	1232.08			1165.98			1151.16		
Level 1 Intercept	0.37			0.37			0.35		
Level 2 Intercept	0.63***			0.63***			0.63***		

Note. Level 1: $N = 512$. Level 2: $N = 154$.

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Emotional exhaustion

Hypothesis 4a predicted that networking behavior would be negatively related to emotional exhaustion on a daily basis. In the null model, the intercept was the only predictor (see Table 32). In Model 1, I added networking. Networking behavior and emotional exhaustion were significantly and negatively related, estimate = -0.07, $SE = 0.03$, $t = -2.23$, $p = .014$. Thus, results supported Hypothesis 4a.

Hypothesis 4b predicted a mediating effect of positive affect on the relationship between networking behavior and emotional exhaustion. As before, I tested the mediation hypothesis following the procedure suggested by Preacher & Hayes (2004). Model 2 showed a negative relationship of positive affect and emotional exhaustion, estimate = -0.40, $SE = 0.05$, $t = -8.76$,

$p \leq .001$ (Table 32). After adding positive affect in Model 2, the relationship between networking behavior and emotional exhaustion was still significant, estimate = -0.05, $SE = 0.03$, $t = -1.69$, $p = .047$. Thus, Hypothesis 4b received support, as positive affect partially mediated the relationship between networking behavior and emotional exhaustion.

Table 32

Multilevel Estimates for Models Predicting Day-Level Emotional Exhaustion

Variable	Model 0			Model 1			Model 2		
	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>
Intercept	2.54	0.05	51.22***	2.53	0.05	50.44***	2.53	0.05	50.49***
Networking				-0.07	0.03	-2.23**	-0.05	0.03	-1.69*
Positive Affect							-0.40	0.05	-8.76***
Deviance	1139.43			1075.58			999.36		
Level 1 Intercept	0.27			0.26			0.22		
Level 2 Intercept	0.31***			0.31***			0.32***		

Note. Level 1: $N = 580$. Level 2: $N = 157$.

* $p \leq .05$. *** $p \leq .001$.

Work engagement

Hypothesis 5 predicted that networking behavior would be positively related to work engagement on a daily basis. In the null model, the intercept was the only predictor (see Table 33). Entering networking behavior in Model 1 revealed a positive relationship between networking and work engagement, estimate = 0.15, $SE = 0.03$, $t = 5.12$, $p \leq .001$. Thus, results supported Hypothesis 5.

Table 33

Multilevel Estimates for Models Predicting Day-Level Work Engagement

Variable	Model 0			Model 1		
	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>
Intercept	2.94	0.05	58.32***	2.94	0.05	58.30***
Networking				0.15	0.03	5.12***
Deviance	1318.16			1282.54		
Level 1 Intercept	0.24			0.23		
Level 2 Intercept	0.36***			0.36***		

Note. Level 1: $N = 699$. Level 2: $N = 165$.*** $p \leq .001$.**Productive outcome*****Work performance***

Hypothesis 6 predicted that networking would be positively related to work performance. Again, in Model 0, the intercept was the only predictor (see Table 34). I added networking behavior in Model 1, showing that it was positively related to work performance, estimate = 0.08, $SE = 0.03$, $t = 2.75$, $p = .003$. Thus, results supported Hypothesis 6.

Table 34

Multilevel Estimates for Models Predicting Day-Level Work Performance

Variable	Model 0			Model 1		
	Est.	SE	<i>t</i>	Est.	SE	<i>T</i>
Intercept	3.80	0.05	84.20***	3.80	0.05	84.19***
Networking				0.08	0.03	2.75**
Deviance	1458.52			1453.15		
Level 1 Intercept	0.34			0.33		
Level 2 Intercept	0.25***			0.25***		

Note. Level 1: $N = 699$. Level 2: $N = 165$.** $p \leq .01$. *** $p \leq .001$.

Figure 21 depicts an overview of the day-level relationships of networking behavior and energy resource gain (positive affect) as well as attitudinal and productive outcomes.^{46 47}

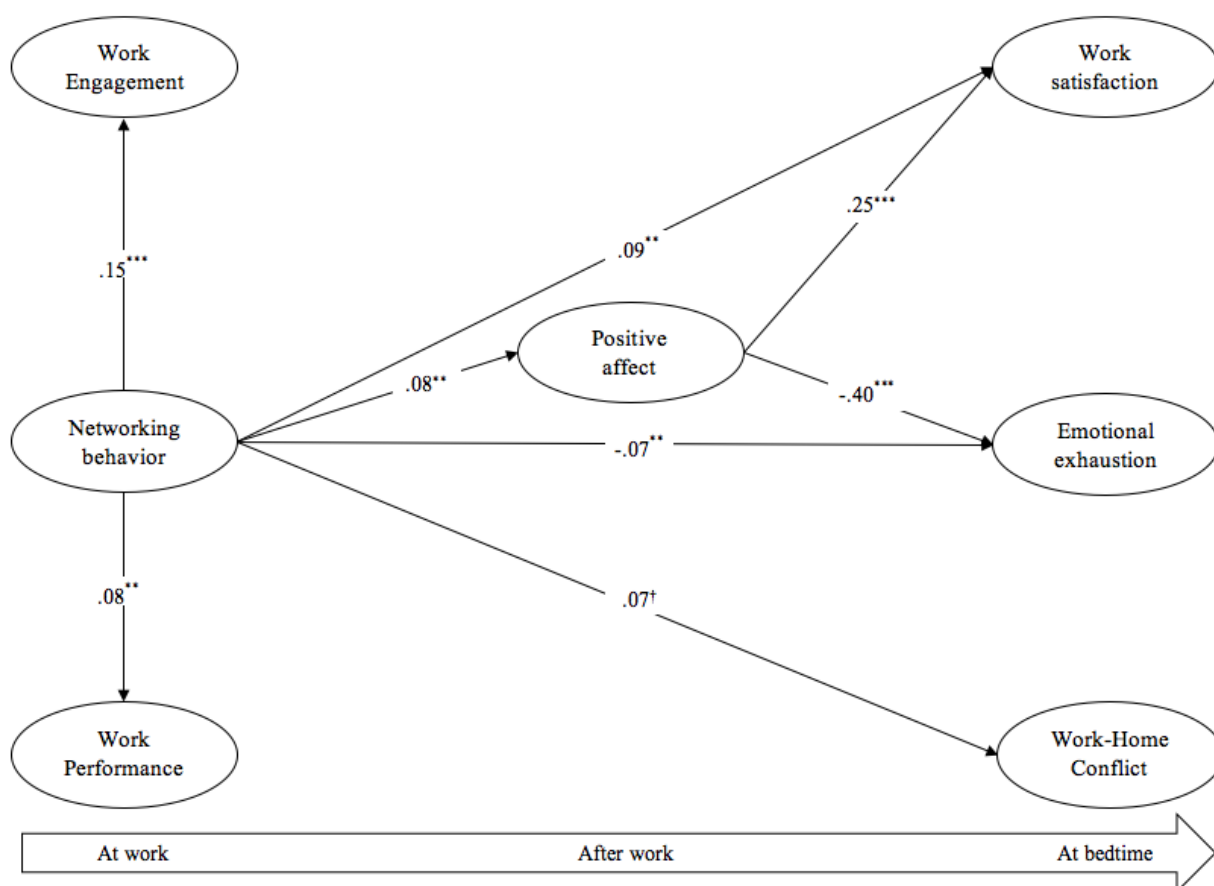


Figure 21. Overview of day-level relationships between networking behavior and energy resource gain, attitudinal and productive outcomes.

⁴⁶ The overview does not represent a path model, but is composed of all variables investigated in Study 4.

⁴⁷ The depicted time course does not necessarily represent the measurement times, but the assumed time course.

Discussion

In Study 4, I took a further step to test the proposed model of networking behavior (cf. Figure 3 and Figure 19) by integrating negative and positive outcomes of employees' networking behavior. That is, in Study 4, I primarily focused on attitudinal (i.e., feelings of work-life conflict and work-related well-being) as well as productive (i.e., work performance) outcomes of networking behavior on a daily basis. I also integrated affective energy resource gain (positive affect; see also Studies 2 and 3).⁴⁸ Thus, in order to examine how networking behavior relates to energy resources and attitudinal and productive outcomes over the course of a day, I conducted a daily diary study with 166 employees.

On the dark side, networking behavior showed a marginally significant relationship with feelings of work-life conflict on a daily basis. Therefore, findings provide further support that networking behavior also comes at a cost. Future studies (e.g., experience sampling studies) should take a more nuanced look at the relationship between networking behavior and feelings of work-life conflict to examine the role of self-control depletion as a potential mechanism.

On the bright side, I found further support for affective energy resource gain following networking behavior. That is, employees' networking behavior at work was positively related to positive affect after work. The affective boost associated with networking behavior might also help explain how networking behavior related to improved work-related well-being on a daily basis. That is, the relationship of networking behavior with work satisfaction as well as emotional exhaustion was partially mediated by positive affect. Furthermore, the positive relationships of

⁴⁸ I also assessed self-regulatory energy resource drain. However, due to the extended time frame, self-control processes could not be adequately captured (Tyler & Burns, 2008; see also Discussion of Studies 1 and 2). I found no relationship between networking behavior and self-reported self-control depletion.

networking behavior with work engagement and work performance correspond to findings of prior diary studies (Dubbelt et al., 2016; Nesheim et al., 2017).

Taken together, results support the proposed model of networking behavior, suggesting that networking behavior leads to attitudinal and productive outcomes throughout the day. Noteworthy, on a daily basis, the beneficial outcomes of networking behavior (i.e., positive affect, work-related well-being, and work performance) seem to outweigh the detrimental outcomes (i.e., feelings of work-life conflict).

The diary study design utilizing frequent, repeated measurement is a good approach to capture networking behavior and its outcomes in employees' natural work contexts. Measuring networking behavior on a daily basis reduces the recall bias that often flaws survey designs (Ohly et al., 2010). When asking participants to report about their workday, they only have to think back a few hours, which should increase the accuracy of their reports.

I acknowledge that despite making important contributions to test the developed model (i.e., integrating attitudinal and productive outcomes), this study is not without limitations. For instance, I did not measure energy resource states immediately after employees engaged in networking behavior but after work. As discussed before, energy effects of networking behavior might be too short-lived to stay in effect such a long time. However, whereas I first investigated energy processes in controlled laboratory settings and then replicated results in the field, in Study 4, I primarily focused on attitudinal and productive outcomes of networking behavior on a daily basis. This is based on scholar's arguing that the day-level is an appropriate level of analysis to examine the complex dynamics of interpersonal behavior and its outcomes (e.g., Halbesleben & Wheeler, 2015).

Also concerning internal validity, some of the day-level variables were measured concurrently (networking behavior, positive affect, work engagement and work performance), which might involve the risk of common method variance. To reduce a potential bias, I applied several methods recommended by scholars (e.g., Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Conway & Lance, 2010): For instance, all measures were derived from established questionnaires with good psychometric properties. Also, I sought to avoid overlap in items measuring different constructs to rule out conceptual overlap. Furthermore, I placed predictor and criterion variables on separate pages and used different scale formats. In addition, I guaranteed participants anonymity to reduce evaluation apprehension.

Aside from common method bias, the concurrent measurement of networking behavior and some other variables can also make it difficult to resolve causality. For example, with regard to work engagement, Bakker and Demerouti (2008) suggest a reverse effect, such that engaged employees would be better able to mobilize job resources (e.g., by engaging in networking behavior). Due to the correlational design, I cannot completely rule out alternative explanations, such as reciprocal or reverse causal effects. However, it should be noted that I also found relationships between networking behavior at work (reported after work) and attitudinal outcomes reported at bedtime (i.e., feelings of work-life conflict, work satisfaction, emotional exhaustion), thus commending to the proposed causal direction. In order to help clarify causal directions, future studies should ideally add a baseline measurement of the outcome variables, for example, in the morning before employees start working.

Furthermore, regarding external validity, the sample was constrained to highly qualified employees. Therefore, study findings should be replicated with blue-collar workers as well as self-employed or unemployed. Also, academic staff was clearly overrepresented in the sample which

might restrict generalizability of the findings. However, as outlined above, I found no major differences between academics and employees from other professional sectors.

General Discussion

In this dissertation, I explored the dark and bright sides of networking behavior. Therefore, I adopted a resource-theoretical approach. Building on COR and ego depletion theory, I have developed a theoretical model of networking behavior, energy resource drain and gain processes as well as attitudinal and productive outcomes. In developing the model, my central research question was: *How does networking behavior affect energy resources?* Additionally, the model tackled the following questions: *Who is more likely to experience energy resource drain through networking?* And, *how do networking behavior and energy resource processes affect attitudinal and productive outcomes?* I tested the proposed model in two experimental laboratory studies with student samples (Studies 1 and 2) and two correlational field studies with working samples (Studies 3 and 4; cf. Figure 22). In light of the current debate about the ego depletion effect in the face of failed replications (e.g., Carter & McCullough, 2014; Carter et al., 2015; Hagger et al., 2016; cf. Ego depletion theory), I seek to emphasize the fact that, in the context of the present dissertation project, I performed only the four studies reported.

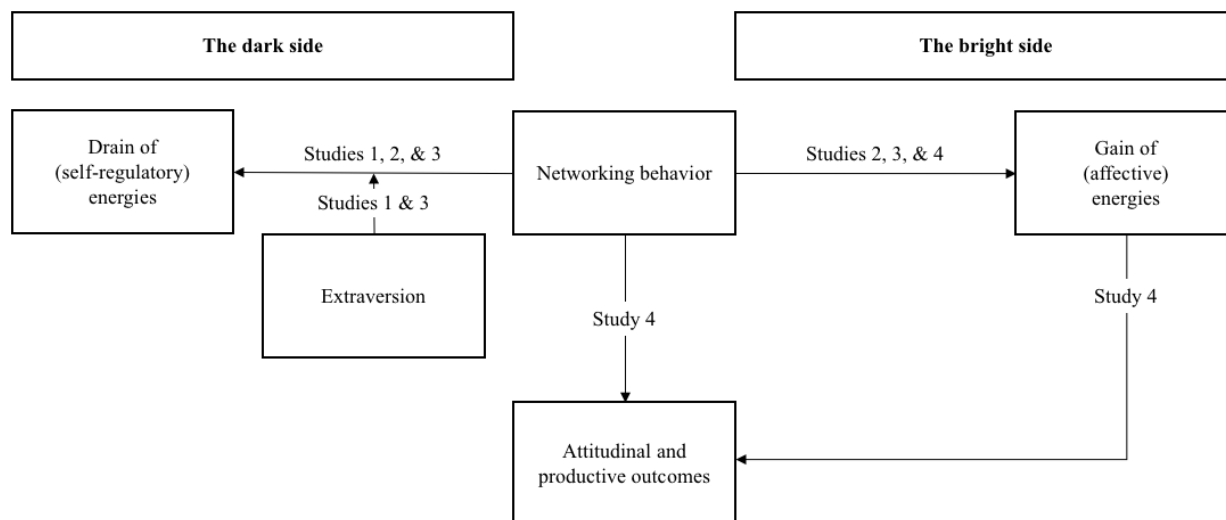


Figure 22. Empirical tests of the theoretical model of networking behavior, energy resources, and outcomes.

On the dark side, networking behavior is a considerable resource investment and consequently drains an individuals' resource reservoirs. As such, findings show that networking depletes self-regulatory energy resources. A mechanism of the self-control depleting effect of networking behavior is impression management. That is, in order to achieve interpersonal goals in networking interactions, people seek to convey a desired image, which, in turn, depletes self-control resources. Regarding boundary conditions, extraversion and social skills moderate the depleting effect. Hence, introverts and people with low social skills are particularly likely to experience self-control depletion following networking behavior, whereas extraverts and socially skilled people experience less self-control depletion through networking. Furthermore, networking behavior seems to result in negative attitudinal outcomes. More specifically, on a daily basis, networking behavior relates to increased feelings of work-life conflict. This might be due to employees' depleted resource reservoirs preventing them from engaging in private activities after work, such as meeting friends or participating in family life.

On the bright side, people anticipate that their resource investments during networking behavior pay off, either immediately or in the future. This actual or anticipated resource gain is reflected by enhanced affective energy resource states. In other words, networking behavior increases positive affect. Furthermore, on a daily basis, networking behavior is associated with positive attitudinal outcomes, such as improved work-related well-being. More specifically, on a daily basis, high levels of employees' networking behavior are positively related to work satisfaction and work engagement. Also, on days that are characterized by high levels of networking behavior, employees experience reduced emotional exhaustion. Part of the relationship between networking behavior and indicators of well-being can be explained by the affective boost following networking. Furthermore, work-related well-being might be facilitated by work-related resources obtained through networking that help employees achieve goals. Likewise, networking behavior positively relates to productive outcomes (i.e., work performance) on a daily basis. This might also be due to gain of networking resources, such as strategic information and task advice facilitating work activities.

By developing and testing a model of networking behavior, energy resource processes and attitudinal and productive outcomes, the present research makes five important contributions to the networking literature. First, it breaks new ground by adopting a *resource-theoretical* approach to networking behavior. In the networking literature, resources are described as central. However, networking behavior has not yet been considered in light of resource theories such as COR (Hobfoll, 1989, 2001). COR originates from the stress literature and has become increasingly popular in the organizational literature to explain how resource changes can predict burnout (Hobfoll, 2002; Hobfoll & Freedy, 1993) and well-being (Halbesleben et al., 2014; Hobfoll, 2002, 2011). In a recent study on interpersonal organizational citizenship behavior (OCB), also known

as helping behavior, the authors used COR as a guiding framework to explain how employees' daily OCB simultaneously involves negative and positive effects (Koopman et al., 2016). More specifically, interpersonal OCB interfered with perceptions of work goal progress, but it was also associated with positive affect. In this vein, COR seems to provide a promising framework to shed light on potential resource costs and benefits of networking behavior. Building on COR, I focused on several constructs – for example, networking behavior, extraversion, energies, or well-being – that, in the COR literature, have generally all been argued to be “resources” (cf. Conservation of Resources Theory). Building on COR's resource typology, I took an initial step in clarifying the role of these constructs in the context of networking behavior. That is, I delineated the complex relationships between resource investment behavior (i.e., networking behavior, cf. Halbesleben & Wheeler, 2015), moderating effects of constructive resources (i.e., extraversion), energy resource drain (i.e., self-control depletion) and energy resource gain (i.e., positive affect) and attitudinal (i.e., feelings of work-life conflict, work-related well-being) and productive outcomes (i.e., performance, cf. ten Brummelhuis & Bakker, 2012). Drawing on COR and ego depletion theory, I developed and tested an integrative model of the dark and bright sides of networking behavior in terms of energy resources and attitudinal and productive outcomes.

Second, by focusing on immediate energy effects and day-level outcomes, the present research considered *short-term* consequences of networking. Short-term consequences have been widely neglected in networking research, thus leaving it an open question as to how people directly experience their networking behaviors. Because energies are highly transient (ten Brummelhuis & Bakker, 2012), they can only be adequately captured with a novel, finer-grained process approach. Prior networking studies have mostly relied on cross-sectional data, whereas the few longitudinal studies have relatively long periods between data collections (e.g., every 12 months over the course

of 2 years, cf. Wolff & Moser, 2010). Typically, in these studies, networking behavior is conceptualized in a rather static way by asking individuals to estimate how often they have shown networking behaviors in the past months or year (e.g., Forret & Dougherty, 2001). Likewise, criteria are typically measured statically (e.g., number of promotions received at a given point in time, cf. Wolff & Moser, 2010). However, theoretical frameworks such as the COR theory suggest that resource processes are more dynamic than static (Hobfoll, 1989, 2001). Accordingly, scholars recently called for research designs that “better match the dynamic nature of COR theory.” (Halbesleben et al., 2014, p. 1356; see also Bolino et al., 2012). To address this critique, I explored widely uncharted waters in terms of study designs. The two experiments in this dissertation are among the first studies examining networking behavior in the laboratory (see also Casciaro et al., 2014). The experimental design allowed for manipulating networking behavior and analyzing micro processes in a controlled setting. Additionally, in order to learn more about the dynamics of networking behaviors and related outcomes on a daily basis, I used a daily diary study design. Manipulating networking behavior as well as measuring networking behavior on a daily basis allowed for examining how engaging in networking behavior affects people, irrespective of their habitual behavior. Therefore, I went beyond the dichotomous classification of people into “networkers” or “non-networkers,” but rather examined how networking affects people in the short-term. Over the course of the four studies, I gradually extended the investigated time frame: In the first three studies, I fathomed the immediate effects of networking, whereas in Study 4, I examined networking behavior and its outcomes on a daily basis. Of course, extending the time frame between the assessments naturally comes with less control, and hence, a decline in internal validity. However, at the same time, external validity (generalizability, Cronbach, 1982) increased over the course of the four studies. Defining external validity as “inference about whether the

causal relationship holds over variation in persons, settings, treatment, and measurement variable” (Shadish et al., 2002, p.19), the robust findings of the four studies suggest a high external validity. Therefore, the used multi-method approach advances networking research because it allows for adequately capturing short-term effects of networking.

Third, by focusing on energies, I integrated *personal* resources into networking research. This is highly relevant given that personal resources can have considerable downstream effects on employees themselves, as well as on their organizations and families (cf. Hobfoll, 2001; ten Brummelhuis & Bakker, 2012). As such, I showed that gain of affective energy resources through networking influences indicators of employees’ work-related well-being (work satisfaction, emotional exhaustion) over the course of the day. Hence, this research takes into account that networking behavior might not only be relevant for employees’ work and careers, but that its outcomes might also transcend the workplace and enter into employees’ private lives. By doing this, I embedded networking behavior into the broader context of people’s lives.

Fourth, the present research adopted a *cost-benefit* approach. Considering the sheer volume of research on networking, it is surprising how little attention has been paid on the potential costs of networking behavior. Indeed, the present findings suggest that networking is not exclusively “good,” but cuts both ways. That is, networking behavior depletes self-regulatory energy resources, but also generates affective energy resources. Likewise, it seems that networking behavior is associated with increased feelings of work-life conflicts, but it is also relates to improved work-related well-being and work performance. From a theoretical standpoint, the simultaneous examination of the resource-consuming and resource-generating processes of networking behavior is important because it provides a more comprehensive test of COR. From a

practical perspective, shedding light on potential costs of networking behavior is important for people to decide whether and how to use networking as a career management strategy.

Fifth, I examined *boundary conditions* of the energy resource drain process, thus investigating for whom networking behavior is particularly costly. More specifically, I identified personality factors (i.e., extraversion) and skills (i.e., social skills) that buffer against the depleting effect of networking. Examining moderating effects allows for determining more accurately, who must be particularly aware of the resource costs inherent in networking. Of practical significance, these findings might help explain why introverts usually shy away from networking (e.g., Forret & Dougherty, 2001), even when they desire to obtain long-term benefits of networking such as effective networks and career success (Ingram & Morris, 2007; Obukhova & Lan, 2013; see also Gallagher et al., 2011). Under the assumption that resource gains are the same for all individuals,⁴⁹ introverts might indeed benefit from engaging in networking more often. However, because resource depletion following networking behavior is stronger for introverts, the cost-benefit calculation and hence the incentive structure of networking might be less positive for introverts. For example, although engaging in networking makes introverts feel good, it might also make them more likely to later show signs of ego depletion, such as breaking their diet rules, showing less persistence in unpleasant tasks, or behaving in socially inappropriate ways (cf. Zelenski et al., 2012). Buffering effects of personality also provide support for COR's assumption that specific traits (i.e., extraversion) might act as resources themselves and enable people to effectively invest resources to maximize resource gains down the road (i.e., engaging in networking behavior, cf. Hobfoll, 2001, 2002). In contrast, according to COR, those who lack resources (i.e., extraversion)

⁴⁹ In Study 3, I found no moderating effect of extraversion on the relationship between networking behavior and positive affect.

are likely to adopt a defensive posture to conserve their resources (i.e., disengaging from networking behavior). This finding also supports COR's notion that the value of resources can vary among individuals: What is a resource to one person could be a demand to another (Halbesleben et al, 2014; Hobfoll, 1988, 1989). Hence, for extraverts, networking might be perceived as a resource because it represents an effective means to generate other resources and achieve goals. In contrast, introverts might tend to perceive networking behavior as resource-threatening. This theorizing is particularly relevant, given that, in general, resource loss is disproportionately more salient than resource gain (Hobfoll, 1989, 2001).

I acknowledge that, despite making several important contributions to the networking literature, the present research is not without limitations (for a more detailed discussion of limitations see Discussions of Studies 1 – 4) and thus suggests several directions for future studies. First, in Studies 1 and 2, the two measures of self-control (candy consumption, State Self-Control Capacity Scale) did not show the expected correlation. Furthermore, in Studies 1 and 2 as well as in Study 4, I did not find a significant effect of networking behavior on self-rated self-control, as measured with the State Self-Control Capacity Scale (Bertrams et al., 2011). As discussed before, this might be rooted in the study designs that might have allowed for replenishing self-control resources in between the exertion of networking behavior and the assessment of self-rated self-control. Despite the surprising findings of Study 1, I did not react by changing the order of the two self-control measures in Study 2. As discussed, that is because I attached more importance to the behavioral measure of self-control (relative to the self-report measure) because it should be less prone to motivational biases in self-reports or lack of introspective access (cf. Hofmann et al., 2005; see also Discussion of Study 1). Then, in Study 4, I primarily focused on day-level relationships between networking behavior and attitudinal and productive outcomes, as predicted

by the developed networking model (cf. Figure 3). While focusing on day-level outcomes of networking behavior, the daily diary study design was a promising approach. However, in order to examine immediate effects of networking behavior on self-control in employees' natural work contexts, experience sampling methods might be better suited. Ideally, these methods might integrate behavioral measures of self-control, for example, every networking interaction might be followed by an online assessment of participants' persistence on challenging anagrams (e.g., Gailliot, Plant, Butz, & Baumeister, 2007, Study 8; Gordijn, Hindriks, Koomen, Dijksterhuis & Van Knippenberg, 2004, Study 5).⁵⁰ Another alternative explanation for the contradicting findings regarding behavioral and self-reported self-control might be complete independence of the underlying constructs (cf. Hofmann et al., 2005), thus questioning validity of the measures. Opposing this assumption, prior studies have confirmed the validity of the behavioral measures (e.g., meta-analysis: Hagger et al., 2010) and the State Self-Control Capacity Scale (e.g., Bertrams et al., 2011). I suggest, however, that future studies should take a closer look at the State Self-Control Capacity Scale in the context of networking behavior to unravel the surprising findings of the present research.

Another limitation refers to the samples used in the four studies. In Studies 1 and 2, I drew on student samples, which might restrict generalizability. However, I was able to replicate results with working samples in Studies 3 and 4. In Study 3, due to the study setting (real networking events), I did not employ a random sampling method. The tendency to participate in a networking event, however, might be influenced by personal characteristics. Therefore, the sample in Study 3

⁵⁰ Also, these studies might use more "objective" measures of networking behavior. For instance, participants could wear portable technology to track their networking encounters (see also Bergemann et al., 2017).

likely includes more “habitual networkers” relative to the population as a whole.⁵¹ Notably, the detrimental effect of networking behavior also applied to those who (presumably) had deliberately sought out a networking situation. In Study 4, the sample was constrained to highly qualified employees and included a great portion of academic staff. However, I found no major differences between academics and employees from other professional sectors (see Participants in Study 4). Future studies might replicate findings with blue-collar workers, self-employed, or job-seekers. Finally, because all data in the present research were collected in Germany, future research should examine if the findings can be replicated across different cultural contexts. For example, studies suggest that networking behavior is as relevant in Chinese businesses as in western organizations (e.g., Han, Wang, & Kakabadse, 2016). Also, as in western contexts, Chinese employees use impression management strategies in networking situations. However, studies indicate that impression management tactics used by Chinese employees might differ from the strategies employed by employees in Western cultures⁵² (e.g., Bailey, Chen, & Dou, 1997; Han et al., 2016; Hwang, 1987). This might have implications for the self-control depleting effect of networking behavior as impression management has been identified as a mechanism of the self-control depleting effect of networking behavior (see Study 2). Therefore, replicating and extending the present research to different cultural contexts would be helpful to learn more about the robustness of the finding that networking behavior carries two faces in terms of energy resources.

Furthermore, future research might enhance the dark side of the developed model by identifying further costs of networking behavior. For instance, on a daily basis, networking

⁵¹ Supporting this assumption, the sample in Study 3 had a significantly higher mean regarding extraversion than the sample in Study 1 (see Discussion Study 3).

⁵² For example, in Chinese organizations, impression management is more likely to involve attempts to falsely underscore loyalty, selflessness, respect for authority, a strong work ethic, and concern for the common good.

behavior might interfere with employees' subjective perceptions of work goal progress. That is, to some people, "it is a fine line between networking and not-working" (Kuwabara et al., 2016, p. 3) and they might feel counterproductive when engaging in networking. COR conceptualizes time as a crucial, yet scarce resource (Hobfoll, 1989). Accordingly, studies show that, when time is limited, individuals face a trade-off between completing their core work and doing other things (Barnes, Hollenbeck, Wagner, DeRue, Nahrgang, & Schwind, 2008; see also Koopman et al., 2016). Employees might feel they could have accomplished more of their core duties had they not spent their limited time engaging in networking behavior. Also, employees engaging in networking behavior at work might experience more role overload and role ambiguity because they might feel that other employees depend heavily on them (cf. Cullen, Gerbasi, & Chrobot-Mason, 2018). Additionally, future studies should take a more nuanced look at the mechanisms of the positive relationship of employees' networking behavior and experienced feelings of work-life conflicts. Hence, as put concisely by Koopman and colleagues (2016): "The future of "dark side" research [...] appears to be bright indeed" (p. 427).

Also, future research should extend the developed model by showing how networking behavior might trigger either resource loss or gain spirals, depending on its effectiveness. Unfortunately, networking behavior might not always be effective, that is, at times people might invest a substantial amount of time and energy without receiving the expected benefits. If networking is that ineffective, individuals will probably experience stress (Hobfoll, 2002; ten Brummelhuis & Bakker, 2012). This stress might ignite a resource loss spiral as COR theory proposes that stressed (i.e., resource-poor) individuals adopt a defensive posture to conserve their remaining resources. Accordingly, a recent study showed that stressed individuals were unable or reluctant to invest resources in creating new communication ties (Kalish, Luria, Toker, &

Westman, 2015). That way, however, these stressed individuals might have missed out on networking opportunities that had the potential to provide additional resources and enhance well-being.

On the other hand, COR states that as individuals gain resources, they are in a better position to invest and gain additional resources (a resource gain spiral). Hence, positive affective states following networking behavior might ignite such gain spirals. For example, research with Fredrickson's (2001) broaden-and-build theory has shown that momentary experiences of positive emotions can build enduring psychological resources (e.g., social support) and hence trigger upward spirals toward emotional well-being (e.g., Viswesvaran, Sanchez, & Fisher, 1999). Interestingly, when using positive affect as a marker of perceived resource gain (cf. Halbesleben et al., 2014), findings from the two field studies (Study 3 and 4) indicate that individuals perceive most networking interactions as profitable, as networking behavior positively relates to positive affect.

Furthermore, findings of the present research suggest several practical implications. First, employees should be aware of the dual effects of networking behavior. Knowledge on costs is important because it allows individuals to make more informed decisions about whether and how to use networking as a career strategy. As the stem "work" in networking suggests, networking behavior should be considered an *investment* into one's career. Considering self-regulatory energy resource drain implicates setting time for resource replenishment when scheduling networking occasions. In fact, many people use their lunch breaks to engage in various networking activities. They should, however, ensure that they get the chance to recover afterwards; that is, taking a break from their "break". Studies suggest that a ten minutes break (might be a short walk or relaxing at the desk) allows the self's depleted resource reservoirs to adequately replenish (Tyler & Burns,

2008). In contrast, if there are no opportunities for replenishment, resource depletion is assumed to continue or worsen (Baumeister et al., 2007). This assumption has been shown in research where when self-control depleted, people were less effective at managing their social behavior so as to make a good impression, and they sometimes even behaved in annoying or off-putting ways (Vohs et al., 2005). At the workplace, however, this behavior might have severe consequences for employees.

Also, findings are highly relevant for organizations implementing network building human resources (HR) practices (cf. Collins & Clark, 2003) or arranging an event (e.g., a conference) that involves networking opportunities. For instance, participants should always have the chance to get away from such an event for several minutes to restore their resources (“escape rooms”). Another means to alleviate depletion at networking events could be the option to switch to other (non-social) tasks, for example, to study materials on display (e.g., posters, video screens, cf. Tyler & Burns, 2008).

In addition, findings should be integrated in networking trainings to help individuals establishing effective networking habits. Even though studies suggest that person-level networking is relatively stable (e.g., Meier & O’Toole, 2005: $r = .53$ over two years; Sturges et al., 2002: $r = .56$ over 12 months; Wolff & Moser, 2006: $.65 < r < .80$ over four months), findings of the daily diary study (Study 4) show that there is substantive within-person variation at the day-level. Likewise, networking training research suggests that networking behavior can be taught and developed to some degree (Ferris et al., 2001, Schütte & Blickle, 2015). Most trainings to date emphasize the importance of networking behavior, point out networking opportunities, and bring people to practice and develop their networking behavior (e.g., de Janasz & Forret, 2008; Schütte & Blickle, 2015; Wanberg, Van Hooft, Liu, & Csillag, 2018). However, simply understanding the

importance of networking and knowing when and how to network might not be enough to bring people to actually network if they view networking as resource threatening (knowing-doing gap, Kuwabara et al., 2016; Pfeffer & Sutton, 2013). Therefore, networking trainings might also benefit from the inclusion of strategies for replenishing self-control resources.

Furthermore, the present research showed that individual differences (e.g., extraversion) influence the extent of resource depletion following an individuals' networking activities. Hence, for introverts, it is clearly possible and sometimes desirable to engage in networking, but it costs them more effort. Accordingly, results from Studies 1 and 3 suggest that introverts might not lack networking skills, but rather experience incomparably high resource costs following networking behavior (see also Gallagher et al., 2011). Thus, networking trainings should particularly address and be tailored to introverts. In a recent study that supports this notion, the authors developed an online intervention aimed at improving job seekers' networking self-efficacy (job seeker confidence about engaging in networking), networking use (amount of time spent in networking), and networking utility (extent that networking conversations provide useful benefits, Wanberg et al., 2018). Based on an experimental field study with two control groups, Wanberg et al. (2018) found that the networking training intervention was particularly effective for introverts with regard to improving their networking self-efficacy. Hence, networking trainings seem to be a promising approach to counteract the detrimental effect of networking behavior, particularly for introverts.

Taken together, the present research sheds some light on the complexity of resource-consuming and resource-generating processes inherent in networking behavior, thereby suggesting a number of important implications for practice while also paving the way for future work.

Conclusion

Taking a resource-theoretical perspective, networking behavior has a dark and bright side in terms of energy resources. In a nutshell, people's energy resource state after engaging in networking behavior can be described as "depleted, but happy". Regarding resource costs of networking behavior, introverts (relative to extraverts) pay a higher price in terms of self-regulatory energy resources. Hence, for introverts, the cost-benefit ratio of networking behavior seems less rewarding. With regard to attitudinal and productive outcomes of networking behavior on a daily basis, the bottom line is relatively positive. For example, networking behavior relates to improved work-related well-being. Overall, I hope that the present research contributes to a more elaborated and balanced discussion of networking behavior among scholars and among practitioners.

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Appendices

Appendix A

Instruction Networking Task in Studies 1 and 2

Please read the brief role descriptions and consider ways to network and “market” yourself. Be creative and do not limit yourself to slogans like “I can offer..., I am in need of...”. You might pad your role with further details. You have 3 minutes to prepare your role.

Then, you will have 20 minutes to network. Please make sure to make a professional impression! Shake hands with every person you will get to know, introduce yourself and your request and address your interaction partners formally. Take time to make a positive impression to your interaction partners, might be they can help you.

Your task will be to find the people who will be able to help you. At the same time, you can extend your individual network and introduce your contacts to one another.

At the end of the experiment, the person who has successfully solved the task and has networked most successfully will receive a bonus of 10€. Therefore, we will ask each participant who of the seven interaction partners was the best networker during the experiment (e.g., particularly helpful or likable). The one person who has successfully found the target persons who can help him or her *and* was elected as the “best networker” by most of the interaction partners, will receive the bonus (if more than one person wins, the bonus will be raffled amongst the winners). Please make use of the whole 20 minutes. Imagine, you are at an event and cannot leave early. Keep talking to your interaction partners and stay focused.

Role description

Appendix B

Instruction Stroop Tasks in Study 1

HD Stroop

In the following task, you will need the keyboard. Place it in front of you in a way that enables you to press the marked keys.

In the center of the screen, you will be presented with a number of color words in different colors of font. For each one, you will need to identify the FONT COLOR of the word (yellow, green, or red). Then, press the key that corresponds to the FONT COLOR of the word.

Example: If the word “yellow” will be displayed in red font, you should press the yellow key. The same holds true for words that are displayed in yellow or green font.

In contrast, if a word is displayed in blue font, you should press the key that corresponds the MEANING of the word.

Example: If the word “yellow” will be displayed in blue font, you should press the yellow key.

Please respond as fast as possible without making many errors! The program will record your accuracy and your reaction time.

In total, 48 participants will run through this test. The six participants with the lowest error rate will receive a bonus of 10€. The winners will be named in the final report (if they agree).

First, you will respond to four test items. After successfully passing the test items, you can press the space-bar to start the task. The task will take you about 20 minutes.

If you have any further questions, please address the experimenter.

LD Stroop

In the following task, you will need the keyboard. Place it in front of you in a way that enables you to press the marked keys.

In the center of the screen, you will be presented with a number of words. For each one, you will need to identify the FONT COLOR of the word (yellow, green, red, or blue). Then, press the key that corresponds to the font color of the word.

Please respond as fast as possible without making many errors! The program will record your accuracy and your reaction time.

In total, 48 participants will run through this test. The six participants with the lowest error rate will receive a bonus of 10€. The winners (if they consent) will be named in the final report.

First, you will respond to four test items. After successfully passing the test items, you can press the space-bar to start the task. The task will take you about 20 minutes.

If you have any further questions, please address the experimenter.

Appendix C

Table C1

Regression of Self-Rated Self-Control on Condition and Extraversion in Study 1

Steps		Unstandardized		Standardized	R^2	ΔR^2
		Coefficients		Coefficients		
		b	SE	β		
1	-	-	-	-	.23***	
	Networking ^a	0.55	0.13	.27***	-	-
	Extraversion	0.37	0.63	.37***	-	-
2	-	-	-	-	.23***	.00
	Networking	0.55	0.13	.27***	-	-
	Extraversion	0.40	0.09	.39***	-	-
	Networking \times Extraversion	-.06	0.13	-.04	-	-

Notes. $N = 206$. Dependent variable: Self-control (self-rated, SSCCS).

^aNetworking (0 = HD & LD Stroop, 1 = NW).

*** $p < .001$.

Table C2

Regression of Self-Rated Self-Control on Condition and Social Skills in Study 1

Steps		Unstandardized		Standardized	R^2	ΔR^2
		Coefficients		Coefficients		
		b	SE	β		
1	-	-	-	-	.11***	
	Networking ^a	0.62	0.13	.31***	-	-
	Social skills	0.12	0.07	.12 [†]	-	-
2	-	-	-	-	.11***	.00
	Networking	0.62	0.13	.31***	-	-
	Social skills	0.14	0.09	.14	-	-
	Networking \times Social skills	-.05	0.14	-.03	-	-

Notes. $N = 206$. Dependent variable: Self-control (self-rated, SSCCS).

^aNetworking (0 = HD & LD Stroop, 1 = NW).

[†] $p \leq .10$. ** $p < .01$. *** $p < .001$.

Appendix G

Instruction Social Control Task in Study 2

You have 20 minutes to talk to each other in a casual and informal manner.

Behave the way you like and feel most comfortable with. You do not need to pay heed to anything specific.

At the end of the experiment, a bonus of 10€ will be raffled. The raffle is completely irrespective of your behavior during the experiment.

Role description

Appendix D

Table D1

Regression of Self-Rated Self-Control on Condition and Impression Management in Study 2

Steps		Unstandardized		Standardized	R^2	ΔR^2
		Coefficients		Coefficients		
		b	SE	β		
1	-	-	-	-	.00	
	Networking ^a	-.09	0.18	-.05		-
2	-	-	-	-	.24***	.24***
	Networking	2.96	0.74	.31***	-	-
	Impression management	10.67	2.12	.39***	-	-

Notes. $N = 127$. Dependent variable: Self-control (self-rated, SSCCS).

^aNetworking (0 = social interaction, 1 = NW).

[†] $p < .1$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Appendix E

Table E1

Multilevel Estimates for Models Predicting Day-Level Self-Control in Study 4

Variable	Model 0			Model 1		
	Est.	SE	<i>t</i>	Est.	SE	<i>t</i>
Intercept	3.43	0.04	88.45***	3.43	0.04	88.46***
Networking				0.02	0.03	0.76
Deviance	1251.19			1250.58		
Level 1 Intercept	0.25			0.25		
Level 2 Intercept	0.18			0.18		

Note. Level 1: $N = 699$. Level 2: $N = 165$. Self-control (self-rated, SSCCS).*** $p \leq .001$.